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ABSTRACT

This comprehensive description of the overall situation and development of the Austrian institutions of higher learning contains a description of the major legal provisions. It provides the background for a policy review of Austrian higher education by the Education Committee of the OECS, meeting in Paris, in May 1975. It also deals with the position of the institutions of higher learning in the entire educational system, particularly in the field of tertiary education. Among other things, the use of modern data systems and the available findings of sociological investigations into questions pertaining to the development of institutions of higher learning are discussed. (Author/KE)

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EDUCATIONAL POLICY AND PLANNING

HIGHER EDUCATION AND RESEARCH IN AUSTRIA

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HE 008 115

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

PARIS 1975

BUNDESMINISTERIUM FÜR WISSENSCHAFT UND FORSCHUNG, Vienna

THE UNIVERSITIES IN AUSTRIA

Background-report of the Austrian Authorities

Foreword

This report constitutes the first attempt after the University Report 1972 to give a comprehensive description of the overall situation and development of the Austrian institutions of higher learning. It differs from the University Reports submitted by the Federal Minister to Parliament in that it also contains a description of the major legal provisions. Such a description need not be included in the Reports to Parliament, but it is indispensable for a discussion of the problem on an international level.

For, it is to be particularly noted that this report fulfils a second major function: namely, to provide the background for a policy review of Austrian higher education by the Education Committee of the OECD, meeting in Paris, 13th May, 1975. Preliminary meetings with the OECD Examiners in Vienna in November, 1974 were followed by the Examiners' Report setting out the particular agenda for the discussions in this Committee.

This is the first report to deal with the position of the institutions of higher learning in the entire educational system, particularly in the field of tertiary education.

Among other things, the use of modern data systems, which has been intensified since 1970, and the available findings of sociological investigations into questions pertaining to the development of institutions of higher learning bear fruit for the first time. In many instances the description of the situation was supplemented by attempts to analyse the respective problems. Of course, some aspects had to remain purely hypothetical.

The description and the analysis served as a basis for a first draft of the fundamental guidelines for the future development in tertiary education. These "fundamental guidelines" do not constitute a completely elaborated and binding programme; they are a first suggestion for the overall discussion of the problem.

Dr. Hertha Firnberg
Federal Minister of Science
and Research

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1. THE POSITION OF INSTITUTIONS OF HIGHER LEARNING IN POST-SECONDARY EDUCATION

1.1 DEVELOPMENT AND STRUCTURE OF POST-SECONDARY EDUCATION

A definition of post-secondary education is problematic in more than one respect. It includes questions concerning the comparability of the various levels of qualification, i.e., on the one hand qualification as a prerequisite for the entry into a school, and the qualification level of the graduates of a school, on the other. Further questions relate to an equal assessment of professional education, general education and professional practice.
The access to post-secondary education or "higher studies" and the problem of equal educational opportunities are discussed below.

The definition of post-secondary education as adopted for the purpose of this Report is pragmatic and provisional. It includes such types of schools where the acquisition of a "full training and education" presupposes the secondary-school leaving certificate as an entry qualification, or where training, professional experience or special talent are recognized by law as equivalent entry qualifications.

This definition is provisional insofar as plans for some kind of obligatory education following regular compulsory education are already under discussion.

The difficulties in defining the post-secondary realm shows that although the necessity of reorganizing post-secondary education is increasingly realized, no clear perspectives have been elaborated to date.

The definition in this Report is based mainly on the status quo of the regulations governing the access to post-secondary education. Increasing access possibilities to training programmes with qualification requirements above those of secondary schools would, of course, reduce the importance of the secondary-school leaving certificate

The development of non-university post-secondary education was not initiated until the School Organization Act came into force in 1962. Up to that time post-secondary education was more or less identical with university education.

The School Organization Act of 1962 established training colleges for primary school teachers, thereby raising the level of training and education for compulsory school teachers; thus, the Act created schools - academies and related teaching establishments - the educational level of which is above that of secondary schools.

The academies and related teaching establishments include:

- college for social workers;
- schools for the training of vocational school teachers;
- training colleges for primary-school teachers;
- institutes of education.

Another important step is the establishment of the "Kolleg". Under section 7 of the School Organization Act (schooling experiments) Kollegs have been run at secondary technical and vocational schools since the school year 1963/64. They are designed to offer vocation-oriented training to secondary-school graduates in the form of "short-cycle studies", i.e., mainly in two-year training programmes.

Vocational courses for secondary-school graduates have been held at secondary schools since the inter-war period, being the predecessors of the Kollegs that were introduced in 1963 as schooling experiments. They are not concluded with a leaving examination, and thus they do not confer the same qualifications as the respective secondary technical and vocational schools. The Kolleg is concluded with a leaving examination and is thus regarded as offering a fully qualifying vocational training on the level of the secondary technical and vocational schools.

Article II of the draft of the 5th amendment to the School Organization Act on schooling experiments in technical and vocational education provides for more detailed regulations concerning the Kolleg. In addition to the Kollegs, it lists special training courses and preparatory programmes with similar objectives. According to the explanations attached to this draft, these provisions are designed to introduce "the institutionalization of new types of school in the area of intermediate and secondary technical and vocational training" (1). On the one hand, alternatives to scientific professional training (diploma studies) are to be created; on the other, the demands of the economy for medium-ranking experts are to be met.

Around the same time the Federal Act of March 22, 1961, concerning the regulation of nursing, para-medical and auxiliary medical services provided the legal bases for the professional training of the medium-rank para-medical personnel. The amendment of October 30, 1970, added the training programme for orthopedic services.

Prior to the Art School Organization Act of 1970, the art schools - with the exception of the Vienna Academy of Fine Art, which has had a university statute since 1872 - had the status of academies; yet de facto they already had been recognized as institutions of higher learning (University Report 1972, vol. I, p.273); the de jure recognition was effected by the Federal Act of August 1, 1970, (BGBl. Nr. 54/1970),

The development can thus be characterized in two respects: first, by a shift of educational programmes from the secondary into the post-secondary realm, and second, by the de jure recognition of the academies as institutions of higher learning.

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(1) Article II
Explanations to section 7 of the government bill on the 5th amendment to the School Organization Act of 1972.

The vocational courses for secondary school graduates and the Kollegs at secondary technical and vocational schools, the academies and related teaching establishments (1), and the para-medical schools thus fall within the area of vocation-oriented training and further education. The general "Hochschulkurse" and "Hochschullehrgänge", mentioned in section 18 of the General University Studies Act, may also be included in this category.

Under section 1, subsec. 2., lit. a-d of the General University Studies Act, studies at the degree-granting institutions of higher learning (henceforth called ("universities") have the following objectives:

" a) the development of science and the training and education of future scientists...
  b) the scientific professional training...
  c) education through science...
  d) the further education of university graduates in the light of scientific progress."

---

(1) The School Organization Act of 1962 defines the tasks of the academies and related teaching establishments as follows:

"Section 79. The Task of the School for Higher Social Occupations.
It shall be the task of the school for higher social occupations to develop the secondary education of its pupils by training them in the knowledge and skills required for more advanced occupational activities in the field of social work."

"Section 110. The Task of the Schools for the Training of Vocational-School Teachers.
It shall be the task of the schools for the training of vocational school teachers (Berufspädagogische Lehranstalten) to impart to their students the vocational knowledge and skills necessary to enable them to qualify as teachers of domestic science and vocational subjects at intermediate and secondary technical and vocational schools."

"Section 118. The Task of the Teacher-training Colleges.
It shall be the task of the teacher-training colleges to develop the secondary education of students of suitable vocational dispositions, knowledge and skill by training them as primary-school teachers."

Thus, the objectives of university studies differ from those of vocational education insofar as they serve as preparation for a profession, and hence, the studies at the universities are more subject- than profession-oriented. In addition, further objectives are also defined. Yet, the decisive factor remains to be the difference in the qualifications conferred upon graduation. All regular degree studies at universities are concluded with an academic degree.

In addition to the difference in the levels of qualification and educational objectives, special principles apply to the organization of studies at the universities (section 1, subsec. 1 of the General University Studies Act of 1966, section 6 of the University Organization Act of 1955), namely, the freedom of science and teaching, the combination of research and teaching, the openness toward the variety of scientific teachings and scientific methods, the freedom of learning, the cooperation of teachers and students, and the autonomy of the universities.

1.2 TRAINING AND EDUCATIONAL POSSIBILITIES

About three types of training programmes lead to various levels of qualification:

a) vocational courses for secondary-school graduates and Kollegs; their educational level corresponds approximately to that of the secondary technical and vocational schools;

b) academies and related teaching establishments as an intermediate level before the universities;

c) regular degree studies at universities, their objectives are scientific professional training including the training of secondary-school teachers as well as the recruitment of future scientists.
Regular studies at art schools including the training of secondary-school teachers.

The main differences are: the duration, the degree to which the training programmes are profession-oriented, the qualifications conferred, and the organization of courses.

Training programmes in the individual professional areas are:

a) training for technical and commercial professions: vocational courses for secondary-school graduates, Kollegs, possibly general "Hochschullehrgänge" and "Hochschulkurse";

b) training of teachers:
  ba) for general compulsory schools: training colleges for primary-school teachers;
  bb) for vocational and technical compulsory schools: institutes of education;
  bc) for intermediate and secondary technical and vocational schools unless university studies are required: schools for the training of vocational school teachers (training programmes in home economics and the trades), institutes of education;
  bd) for secondary schools: teacher training programmes at the universities and art schools.

c) training for social professions: college for social workers;

d) training of para-medical assistants: para-medical schools;

e) scientific studies at universities, which are usually not oriented toward a certain profession. University studies lead to the traditional academic professions as well as to higher positions in various professional areas.

The post-secondary training and educational possibilities offered are characterized by the dominant position of the universities and the predominance of teacher training institutions in the non-university field. As alternatives to university studies and to teacher training, there are only training programmes for social professions, for para-medical services and the vocational courses for secondary-school graduates and the Kollegs. The still relatively small range of post-secondary programmes outside teacher training characterizes a transitional phase in the total process of restructuring post-secondary education.

This process of reorganization is not limited to Austria: In June 1973 the OECD conference on future structures of post-secondary education dealt with the overall situation.

The admission prerequisites for post-secondary educational institutions differ from each other considerably. Under special circumstances some institutions, such as the college for social workers, the art schools, the para-medical schools and the schools for the training of vocational-school teachers, accept applicants without a secondary-school leaving certificate. Several schools require special aptitude tests in addition to the secondary-school leaving certificate.

Some of the secondary-school graduates may also attend training programmes that are not listed here under post-secondary education. (1)

The following statements are limited to a presentation of the data material of official statistics. (2)

The data on post-secondary education have been taken from several official statistics. The following tables do not give the sources in detail.

---

(1) E.g. schools for the training of teachers and educational assistants that are not regarded as post-secondary institutions.

(2) For this reason some educational training programmes, e.g., the training of lay teachers of religion, were not included in the Report.
According to information from the "Katechetisches Institut" in the school year 1973/74 237 persons participated in such training programmes in Vienna.

1.3 ATTENDANCE

The number of persons without a secondary-school leaving certificate who attend post-secondary educational institutions as defined in this Report is very low. Only 2 percent of the beginners do not have a secondary-school leaving certificate (3 percent women, 1 percent men). (1) As concerns admission prerequisites, persons without a secondary-school leaving certificate may attend schools for the training of vocational school teachers, colleges for social workers, para-medical schools as well as art schools.

The transfer rates can be calculated only for the universities, as only university statistics are available; with regard to other types of schools only rough estimates are possible by comparing the number of secondary-school graduates of the school year 1972/73 with that of the beginners of the academic year 1973/74.

Not included are all those secondary-school graduates who embark on training courses that are not listed here. Thus, the percentage of secondary-school graduates who continue their education is most likely higher than indicated in this Report. The transfer rates apply therefore only to post-secondary education as defined in the present Report.

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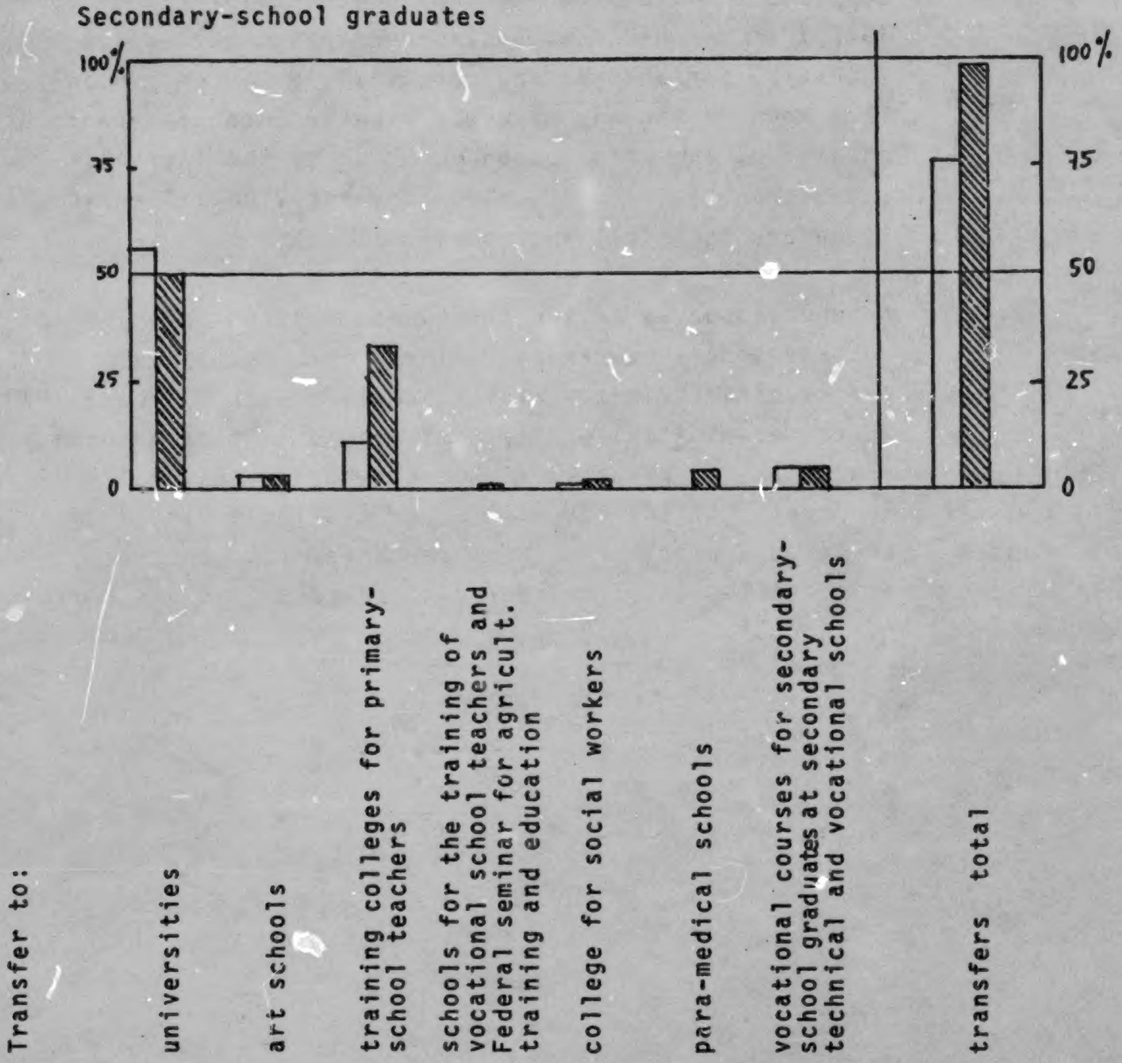
(1) The numbers of secondary-school graduates in these schools are estimates, as no statistical material is available. The art schools are a very special case: the University Report 1972 (vol. I, p. 276) estimated the share of students with a secondary-school leaving certificate at 40 percent out of the total number of students at the art schools. Only Austrian first-semester regular degree students were included in that investigation. About 80 percent of them are older than 18 years. It was assumed, and that assumption is somewhat problematic, that those students had a secondary-school leaving certificate (University Report 1972, vol.I,p.271).

Graph 1: Transfers of secondary-school graduates to post-secondary education



On the basis of rough estimates one can assume that about 85 percent of secondary-school graduates of the school year 1972/73 continued onto post-secondary education (1) (about 75 percent men and more than 95 percent women). That means that many more women enter into post-secondary education. The main reason seems to be the fact that fewer women than men acquire university entry qualifications at secondary technical and vocational schools.

A general survey on the attendance figures relating to post-secondary education reflects the educational opportunities. In the winter semester (school year) 1973/74 there were a total of 71,155 students in post-secondary education, 80 percent of whom attended a university. About 10 percent of the students were enrolled in the training colleges for primary-school teachers, four percent at the art schools, the remainder of 6 percent at the other types of schools.

---

(1) The group of beginners is composed of several graduation classes. Also, not all of the secondary-school graduates continue their education immediately. On the assumption that the transfer pattern remains fairly constant, the shifts caused by the differences in graduation classes seem to be negligible.

Table 1: Pupils (students) in post-secondary education in the school year (winter semester) 1973/74

	Total Number		Total in %
Universities regular degree students (Austrians)	58,613		82.4
Art schools regular students (Austrians)	2,822		4.0
College for the training of primary-school teachers (1)	7,243		10.2
School for the training of vocational school teachers (1)	135		0.2
Federal seminar for agricultural training and education (1)	63	(3)	0.1
College for social workers (1)	386		0.5
Para-medical schools (1)	777	(3)	1.1
Vocational training courses for secondary-school graduates at secondary technical and vocational schools (1) (2)	1,116		1.6
Total (4)	71,155		100.0

(1) As the number of foreigners who attend such schools is extremely low, it is not taken into consideration.

(2) Including 71 students in the two-year vocational course in the hotel trade for secondary-school graduates

(3) Number of pupils of 1972/73

(4) The columns do not always total 100 percent

The number of students registering for the first time or pupils in their first year of training has doubled since 1967. A comparison of the various educational possibilities shows that a marked increase in the number of students occurred particularly at the universities and the training colleges for primary-school teachers. The other types of schools also report increasing student figures, but they are rather insignificant from the quantitative point of view: The number of those who began their studies at the universities or entered the training colleges for primary-school teachers has increased by more than 6,000 since the winter semester 1967/68; the number of persons enrolling in other post-secondary training programmes has increased by no more than approximately 700.

One of the reasons for the marked increase in the number of students in post-secondary education is the growing number of women who are making use of the available educational possibilities: The number of female students has more than doubled since the year 1966/67; the number of pupils and students has increased only by 50 percent.

Mainly women enter non-university education:
Schools for the training of vocational teachers and paramedical schools are attended almost exclusively by women; at the training colleges for primary-school teachers, the college for social workers, the Federal seminar for agricultural training and education there are twice as many women as men.

The individual training programmes have differing lengths. The best basis for comparing the attendance figures for the different schools is a comparison between the students registering for the first time and those students or pupils who are in their first or only year of post-secondary training.

Table 2: Students (pupils) in post-secondary education in the winter semester (school year) 1973/74, in their first semester (first year of training)

	male		female		total	
	number	in %	number	in %	number	in %
Universities, regular degree students (Austrian) (1)	5,465	73.1	3,776	49.5	9,241	61.2
Art schools, regular students (Austrian) (2)	332	4.4	273	3.6	605	4.0
Training college for primary-school teachers (3)	1,075	14.4	2,463	32.3	3,538	23.4
School for the training of vocational school teachers (3)	1	0.0	72	0.9	73	0.5
Federal seminar for agricultural training and education (3)	9	0.1	27	0.4	36	0.2
College for social workers (3) (4)	83	1.1	226	3.0	309	2.0
Para-medical schools (3) (5)	23	0.3	405	5.3	428	2.8
Vocational training courses for secondary-school graduates at secondary technical and vocational schools (3)	493	6.6	381	5.0	874	5.8
Total	7,481	100	7,623	100	15,104	100

---

(1) students registering for the first time
(2) first-semester students
(3) As the number of foreign students is rather low, it is not taken into consideration. In all cases first-semester and second-semester students or students who are in the first or only year of training.
(4) Without preparatory training courses.
(5) Number of pupils of the school year 1972/73 without the number of pupils at the school for logopedic-phoniatric services at Linz and the school for radiological-technical services at Graz.

Table 3: Graduates in post-secondary education

	school (academic year)	male		female		total	
		number	in %	number	in %	number	in %
Universities	1972	3,264	67	1,138	25	4,402	47
Art schools	1972	172	4	122	3	294	3
Training colleges for primary school teachers	1973	1,109	23	2,672	59	3,781	40
Schools for the training of vocational school teachers	1972	-	-	54	1	54	1
Federal seminal for agricultural training and education	1972	22	.	41	1	63	1
College for social workers	1972	8	.	16	.	24	.
Para-medical schools	1972	15	.	271	6	286	3
Vocational courses for secondary-school leavers at secondary technical and vocational schools	1972	281	6	199	4	480	5
Total		4,871	100	4,513	100	9,384	100

A comparison of the number of graduates shows that the non-university training programmes are more often successfully concluded than the university programmes. The highest success rate is reported at training colleges for primary-school teachers, at which only 25 percent of the beginners in post-secondary education are enrolled, but which account for 40 percent of the graduates.

An estimate concerning secondary-school graduates shows that a fairly high number of them continue in post-secondary education. A person, once having received the qualification for post-secondary education, will very likely make use of this possibility. Only a small percentage of the population acquires the qualification for this type of education; therefore, the number of students in the post-secondary field is rather low in comparison with the total resident population of the same age groups (1); however, the percentage is increasing considerably.

In the winter semester (school year) 1967/68 the ratio between beginners in post-secondary education and the resident population (of the same age groups) was 16 to 1,000; in 1973/74 it was already 35 to 1,000.

---

(1) Because of the differing lengths of the training programmes in the individual types of schools a calculation is reasonable only for those in their first year of training.

Table 4: Percentage of pupils and students (beginners) (1) in post-secondary education since the winter semester 1967/68 (2)

Percentage of pupils and students
in the resident population
aged 18 to under 22 years

	male (in %)	female (in %)	total (in %)
1967/68	2.11	1.12	1.63
1969/70	2,72	2.14	2.44
1970/71	3.65	2.51	3.10
1971/72	3.71	3.31	3.51
1972/73	3.50	3.27	3.38
1973/74	3.51	3.48	3.50

---

(1) Students registering for the first time or first-semester students or pupils and students in their first year of training

(2) Without art schools, the Federal seminar for agricultural training and education, and the para-medical schools.

The post-secondary educational institutions are concentrated in some Federal Provinces, above all in Vienna, with more than 50 percent of all students or pupils in post-secondary education. Vienna's dominant position applies to all post-secondary educational institutions with the exception of training colleges for primary-school teachers, the Kollegs and the vocational courses for secondary-school graduates at secondary technical and vocational schools. The Federal Provinces of Burgenland, Vorarlberg, Lower Austria and Carinthia have rather few post-secondary institutions; yet they are in the immediate vicinity of provinces with adequate facilities.

As concerns the regional distribution of educational institutions, one can speak of feeding areas that comprise several Provinces with the post-secondary educational institutions being concentrated in one Province only.

Statistical data on the social backgrounds of pupils and students in non-university post-secondary education are available only for training colleges for primary-school teachers.

Table 5: Educational backgrounds of the fathers of students at training colleges for primary-school teachers and universities.

Education of fathers	students at training colleges for primary-school teachers (in %)	students at universities (in %)	educational level of the male working population, aged 40 - under 65 years (in %)
school without secondary-school leaving exam.	72.0	48.9	88
secondary school	17.5	19.7	7
University	8.2	26.4	5
No data	2.2	5.9	-
Total (1)	100.0	100.0	100

---

(1) The columns do not always total 100 %.

The figures reveal that the social backgrounds of university students differ markedly from those of students who attend the training colleges for primary-school teachers: The fathers of a little less that 50 percent of the university students have no secondary-school leaving certificate, while the figure for fathers of students at the training colleges for primary-school teachers is almost 75 percent. Only 8.2 percent of the fathers of students at the training colleges for primary-school teachers have a university degree; the corresponding figure for the fathers of university students is 26.4 percent.

Even though no data are available on the other post-secondary schools, one can assume that the social backgrounds of the pupils and students more or less correspond to those of the students at the training colleges for primary-school teachers. This shows that, on the one hand, non-university post-secondary education is increasing in importance as possibilities of advancement are offered to young people from population groups that have no close relation to education; on the other hand, this educational realm seems to be less attractive for young people from social groups with a higher educational level or better professional standing.

2. THE UNIVERSITIES

2.1 EDUCATIONAL INSTITUTIONS

2.1.1 Types of studies

The education and training offered at the twelve universities comprise almost exclusively regular degree studies with a prescribed minimum duration of eight to ten semesters (see also 2.2.6). Regular degree students may enroll in about 100 study programmes. Furthermore, a number of study programmes offer specialized training during the second section of studies. There are only a few other types of studies, with low attendance figures.

There are several types of studies the principles of which were regulated by the General University Studies Act of 1966 and later on by special studies acts:

1. regular degree studies:
   - a) normal type: comprising a minimum of eight to ten semesters;
   - b) special type: "studium irregulare" and study experiment;
   - c) short (-cycle) studies
2. "Hochschulkurse" and "Hochschullehrgänge" for non-degree students and auditing students.

Regular degree studies

Regular degree studies are organized into three stages: The diploma studies offer scientific professional training and are divided into two sections of studies. They are followed by the doctoral studies, which are devoted to scientific training per se and last for at least two more semesters.

The first section of studies primarily provides an introduction into the study programme and training in the fundamentals. The second section is devoted to a further penetration into the subject matter. The studies of medicine are organized in a different way; they are divided into three sections and are concluded with the doctoral degree (1).

Under the General University Studies Act, the individual studies are regulated on three levels: studies act - study regulation of the Federal Ministry - study regulation of the academic authority.

In agreement with the principles of legality as laid down in the Austrian Federal Constitution, the influence of the state on the organization of the study rules is reflected mainly by the fact that studies can be regulated only on the basis of laws. Furthermore, the review procedure (also see 2.7.1) shall guarantee that not only aspects of a complete and complex scientific training, but also of a meaningful professional training are taken into consideration when special studies acts are drafted. Only the decision of the legislators permits the Ministry to fulfill their coordinating function by issuing the ministerial study regulations. Then the academic authorities, i.e., the study commissions, have the task of organizing studies in detail by issuing academic study regulations.

Thus, the influence of the state concerns the structure and the general principles of the individual studies, whereas it is the task of the academic authorities to organize them in detail. The university teacher is responsible for organizing the contents and the methods of the individual course.

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(1) As of autumn 1974, only the studies of law, veterinary medicine and Lutheran theology were not yet regulated in accordance with the principles set forth in the General University Studies Act.

The system of studies as laid down in the General University Studies Act and the subsequent special studies acts is based on the cooperation of the legislator, the ministerial university administration and the academic authorities. It was deemed necessary that the task of issuing the academic study regulations be transferred to special academic authorities composed in a one-third parity, namely, the study commissions. They are responsible for the elaboration and the legally binding issuance of academic study regulations, which in addition regulate the examinations. The study regulations should have a proper structure as concerns didactics and should guarantee that talented and industrious persons, studying without any outside interference, are actually in a poisition to terminate their studies within the period of time envisaged by law. Provision is made both for a facultative shortening of studies in the case of particularly talented and industrious students and for an individual organization of studies.

Undoubtedly, there is a certain degree of clumsiness inherent in the system. Yet, provision is made that not only the state and universities influence the organization of the study rules, but also that prospective regulations are publicly discussed as part of the review procedure; in particular, labour and management should have the opportunity to submit comments.

All Austrians are admitted as regular degree students who have reached the age of 18, who submit proof of qualification for university studies (secondary-school leaving certificate and possibly additional examinations), and who submit a certificate of good conduct if the secondary-school leaving examination was taken more than six months prior to application for admission (section 6 of the General University Studies Act).

Diploma examinations and rigorosa are academic examinations as well as state examinations. Passing them entitles one to the use of an academic degree; they grant - possibly on the basis of additional practical training - the right to perform the respective academic profession (e.g., Mag.phil - secondary-school teaching qualification) (sections 34-40 of the General University Studies Act).

"Studium irregulare"

These studies, existing since 1966, are regular degree studies which can be individually organized by the student himself and which offer choices going beyond those of regular degree studies.

"At the request of a degree student, a combination of study fields whose studies are regulated by various special University Studies Acts and the study regulations of the Ministry shall be permitted by the Federal Ministry of Science and Research, after hearing the competent academic authorities, in those cases where this combination appears to be scientifically meaningful and is eighter pedagogically justified or meets a demand for this kind of academic professional training and where there is evidence that the alternative subjects specified in the study regulations of the Ministry do not suffice to attain the goal of learning (studium irregulare)." (sec.13, subsec. 3 of the General University Studies Act).

This type of studies permits the testing of special educational programmes in individual cases. So far it has mainly been used to organically integrate new combinations of subjects which are not yet organized as regular degree studies. The reason may be an individual demand for such a combination of subjects with regard to a special professional goal; or if students believe to obtain, through the same or a similarly organized studium irregulare, a meaningful professional training which has not been offered so far. Approximately 250 students are making use of such studies.

Study experiments

Section 19 of the Federal Act of 1971 on Studies of the Humanities and Natural Sciences goes one step further than the provision governing the studium irregulare.

If at least ten regular degree students of a university meet the requirements for a studium irregulare, study regulations have to be issued, upon the request of the competent academic authority, by the Federal Ministry of Science and Research as well as by a special study commission in order to establish study experiments for a adequate period of time. There is one limitation: if the necessary university facilities are available or can be created. After this period of time the study experiment must be discontinued unless it is continued as a study programme (specialized area) by a Federal Act. If a study experiment is discontinued it is up to the regular degree student to decide whether to terminate his studies as a studium irregulare or to transfer to related regular degree studies. In this case prior studies and examinations are completely credited.

This type of studies, existing since 1971, has already achieved considerable importance. Two study experiments have been introduced: studies in sociology, which can be combined with another subject under the Federal Act on Studies of the Humanities and Natural Science, and a study experiment in business and economic informatics (in addition to the regular degree studies of informatics, which is technically oriented). Some further requests concerning the institution of study experiments are being examined by the Federal Ministry of Science and Research .

While a studium irregulare permits the student to organize his studies individually, study experiments make it possible for a group of students to coordinate their parallel efforts in an organized educational programme lasting for a certain period of time.

Short studies

The Austrian universities do not offer a complete programme of short studies that is geared to the regular degree studies. Among the study programmes that were discontinued in 1966 and have since been newly regulated were commerce, political science, pharmacy, translation and interpreting. The minimum number of semesters required for those study programmes was less than 8 semesters. In reality, however, most students needed far more time (see 2.5). In general, the usual academic degrees were awarded upon graduation.

Under the General University Studies Act there are some regular degree studies with a shorter minimum duration prescribed. Such short (-cycle) studies are:

- computation methods at the Technical University of Vienna and at the Linz School of Economics and Social Sciences .... 4 semesters
- actuarial mathematics at the Technical University of Vienna .... 6 semesters
- translation at the Faculties of Arts and Sciences of the Universities of Vienna, Graz and Innsbruck .... 6 semesters

No academic degrees are awarded except upon completion of studies in translation.

"Hochschulkurse" and "Hochschullehrgänge" for non-degree students and auditing students

In addition to regular degree studies (the essential admission prerequisite to which is a secondary-school leaving certificate) there are study possibilities at universities that are, in principle, open to all persons even if they have not acquired a secondary-school leaving certificate.

There is only a very small offering of such special types of studies (see 2.2.6).

The admission requirements are the following (see also 2.2.1):
Persons who have reached the age of 18 and want to attend courses for a certain period of time shall be accepted as non-degree students if they have the necessary prerequisite knowledge. For "Hochschulkurse" and "Hochschullehrgänge" the age limit may be reduced to the completed 15th year of age subject to the educational goal.

Graduates from institutions of higher learning who want to attend individual courses, training programmes, etc., are accepted as auditing students.Little has been done so far to realize one of the objectives laid down in the General University Studies Act, namely, the further education of university graduates (see 2.2.6).

Principles and objectives of studies

In 1966, the Austrian legislator laid down the principles and objectives concerning the organization of studies at the universities (section 1 of the General University Studies Act). These provisions express the historical and intellectual backgrounds of the study reform. They not only help in the interpretation, but they also constitute real guidelines.

The guiding principles for the organization of studies shall be:

- the freedom of science and teaching;
- the combination of research and teaching;
- the openness toward the variety of scientific teachings and scientific methods;
- the freedom of learning;
- the cooperation of teachers and students;
- the autonomy of institutions of higher learning as provided by law.

The studies shall have the following objectives:

- the development of science and the training and education of future scientists: In addition to scientific professional training, the studies shall assist in acquiring the ability to contribute to the development of science through independent research;
- the scientific professional training: The studies shall impart the fundamental professional knowledge in such a way as to give the students access to the results of science and the tasks of scientific research, the scientific sources and interrelationships, to train them in the methods of obtaining scientific knowledge, and to demonstrate the necessity of further scientific training. The students should be enabled to think critically and act independently to fulfill their future professional tasks in the light of scientific progress;
- education through science: the students should acquire an attitude characterized by objectiveness, clear judgement, intellectual honesty, and tolerance as well as increased responsibility toward the democratic Republic of Austria and the human society. Furthermore, they should learn to understand the relevance of their field as part of science and the relevance of science

as part of culture and civilization;

- the further education of university graduates in the light of scientific progress.

2.1.2 Study reform

The significance of the study reform within the scope of the university reform

The public discussion on the problems of the university reform, in particular on the problem of co-determination and the renewal of the university structure, have revealed a wrong assessment in the weighting of problems. The course of these discussions, in particular the publicity which the individual problems of the university reform have found, must lead to the impression that the primary question concerned the participation of representatives of the students and of the academic intermediary staff in the decision-making process of the academic authorities and perhaps also certain structural changes in higher education. The remaining aspects of the university reform have often been neglected in public discussions.

If one starts from the assumption that it is the aim of the university reform to enable institutions of higher learning to solve the problems raised in our modern society, one has to come to the conclusion that questions of co-determination and structural changes cannot be the primary concern of the university reform. Without going into a detailed discussion of the task that universities have in our modern society, we can certainly say in a simplifying manner that this task consists in coping with mass studies and the science boom. The primary task of universities is thus scientific teaching and related research. Mass studies is the most obvious phenomenon with which an analysis of higher education must be concerned; and solving the problem of mass studies is a prerequisite for coping with other problems of the university reform. In Austria, priority has been accorded to the study reform as opposed to other aspects of the university reform. In this context mention must be made of the fact that the solution of the problems of the study reform is not possible unless the other problems raised in the course of university reform can also be solved at the same time or at least with little delay. Thus, the experiences gained with the execution of the university reform in Austria have clearly revealed that the problems of the administrative reform, the organizational reform and the co-determination are so closely connected with the reorganization of university studies that they even constitute a prerequisite for the execution of the study reform to a certain extent.

Also, it has become obvious that some problems concerning the tasks and positions of university teachers must be solved in close connection with the study reform. This does, however, not mean that, for instance, all the problems concerning the administrative reform, the organizational reform, co-determination, the legal occupational and organizational position of university teachers must be solved before successful study reform can be carried out; but according to experiences gained in Austria it is necessary to solve some of these questions in the course of the study reform.

These considerations clearly show that the study reform is a primary concern of the university reform. The administrative reform has to make sure that the necessary prerequisites for the execution of studies (and scientific activities) be fulfilled in the best way possible by employing modern administrative techniques and up-to-date technical facilities for the administration. It is the task of the organizational reform to structure and organize the institutions of higher learning in such a way as to provide for an organizational frame that is best suited for fulfilling teaching and other scientific tasks. Changes in the composition of the academic authorities, by giving the representatives of the intermediary staff and of the students the right of co-cetermination, shall guarantee that all groups of persons active at the institutions of higher learning can identify themselves with the decisions concerning the execution of teaching and research tasks more than ever before. Finally, the tasks and positions of the university teachers must be adjusted to the changes in their functions. The study reform will serve as a starting point.

The old study and examination system

Before going into the details of the major innovations the General University Studies Act and the ministerial study regulations for the individual study programmes since issued have brought about, some remarks are necessary on the study and examination system prior to the General University Studies Act. This old study and examination system is still in force for individual study programmes for which neither a special studies act nor a ministerial study regulation nor an academic study regulation in accordance with the General University Studies Act have been issued. Also, it still applies to students of higher semesters in studies already reformed.

Those study rules issued prior to the study reform did not contain uniform provisions for the individual fields of knowledge, in particular as concerns the number of semesters to be registered for, the number of sections of studies and the examinations.

Part of the study and examination rules were issued as early as the beginning of this century and contain examination subjects which no longer reflect the latest state of science and research. However, the old designations of the examination subjects were retained by the universities, while the scope of knowledge was expanded. The legal norms no longer correspond to the actual conditions prevailing at the universities.

The aim of the education and training was to offer, in the most comprehensive and complete way, knowledge that the student needed for his subsequent professional practice. The realization of this aim was bound to find its limit because of the rapidly expanding volume of knowledge in almost all fields. For the student this meant a constant increase in the amount of the teaching material offered and in the number of examinations on study fields almost too vast to penetrate. The translation of the student's knowledge from his university education to his subsequent professional practice became considerably more complicated. There were only relatively few instances where the universities tested the teaching material imparted for its absolute necessity with respect to the educational objectives and investigated into a reduction of the study and examination material.

The idea of offering the student as complete a professional training as possible has also been reflected in the various methods employed to determine the level of knowledge achieved by the students. Some of the study programmes are not subdivided; some consist of two- to four-semester sections of studies. The evaluation of the academic success of the student has usually been carried out at the end of a section of studies or even at the very end of studies. Intermediate examinations have been rare, only at technical universities and in the field of medicine have the achievement and performance controls been distributed over the whole length of studies. The idea of offering the student as complete a training as possible and the steadily increasing teaching and examination material may be considered essentially responsible for the excessive periods of time required for studies prior to the study reform.

At universities knowledge was imparted in a predominantly one-directional manner through lectures given by university teachers. Only limited provision was made for introducing the student to scientific work or for a more intensive form of counselling or e.g. the cooperation between university teachers and students with respect to scientific problems.

Such a study and examination system has proved disadvantageous in some aspects, not only as far as the actual time required by the student for his studies is concerned, but also with regard to the educational and training efficiency.

Since the teaching and examination material has become so comprehensive, the student has been forced to acquire lexical knowledge to a greater extent than to use scientific methods toward the solution of individual problems of his study field.

The mental stress on the student in cases of comprehensive examinations at the end of his studies is much greater, because the consequences of a failure are considerably more decisive than in the case of continuous control of the student's performance and achievements in smaller sub-areas of his study field. In addition, the insecurity of the candidate increases as the scope of the examination material expands.

Both the student's own control of his academic progress and the feedback of the academic success to the university teacher do not exist to a sufficient degree. Also, improved contacts between teacher and student are prevented; the examination material is bound to be too comprehensive if only a few individual examinations are required. This makes the objective evaluation more difficult, since momentary subjective criteria become more pronounced both in the student and the university teacher and decisively influence the evaluation of the student's performance and achievements.

Principles of the study reform since 1966

In 1966, the Austrian legislative bodies passed the General University Studies Act (BGBl. Nr. 177/1966) and thus created a uniform legal basis for all studies at Austrian universities. In implementing this skeleton law, which applies to all university studies in general, special studies acts have since been passed for groups of related study programmes; they adjust the fundamental provisions of the General University Studies Act to the requirements of the special study fields, specify the duration of studies in these study fields, and regulate in detail the individual examination subjects and the execution of examinations. On the basis of these special University Studies Acts the Federal Ministry of Science and Research issues study regulations, which shall specify the minimum number of hours per semester the student has to register for in the individual courses of each examination subject, and which shall contain further stipulations concerning the execution of examinations. The aim of these study regulations is to indicate the importance accorded to the individual examination subjects in the course of studies. As a final normative step in the execution of the General University Studies Act, of the special studies act for related study programmes and of the ministerial study regulation for the respective study programme, the competent academic authority of each university issues a study regulation, which has to list the individual courses for the examination subjects.

The reforms of studies and examinations introduced by the General University Studies Act are an attempt to eliminate the negative effects of the existing system of studies.

In recognition of the fact that rapid progress in the scientific realm makes it impossible to offer a complete all-round professional education, the study goals at

Austrian universities have been restricted to offering the student a thorough preparation for his future professional life. This not only implies going back to offering him a wider basis in the fundamentals, but also makes it necessary to resort to an increasing degree to the communication of knowledge in an exemplary manner. Thus, one of the main aims of the study reform is to get the universities to reconsider more than ever before the usefulness and necessity of the teaching and examination material in the light of the new approach to university education; thereby it may be possible to reduce the often rather lengthy periods of time required by the students for their studies. For this reason, the legislator provided for a basic division of university studies into diploma studies designed to prepare the student for his professional career and doctoral studies for a further specialized scientific education.

In addition to the concept of offering purely scientific professional training, the General University Studies Act contains several other principles and aims concerning studies at universities. The studies should assist the student in acquiring the ability to contribute through independent research to the development of science; the student should be enabled to think critically and act independently, to fulfill his future professional tasks in the light of scientific progress and to be aware of his special responsibility which a scientifically trained person has toward society (see also 2.1.1). These general aims were supplemented by special studies acts for the individual groupings of areas of knowledge. The importance of an exact definition of the study objectives for every individual study programme was clearly demonstrated in the discussions which the study commissions had on the individual courses to be included in the study regulation of the academic authority.

The General University Studies Act furthermore represents an attempt to express more clearly the responsibility of the universities toward society by granting the major interest groups the right to participate in the issuance of ministerial study regulations. Thus, a number of bodies outside the university realm, e.g., the trade union association, the Chamber of Labour, the Federal Chamber of Commerce, Trade and Industry, have the possibility to comment on the importance that should be attached to individual examination subjects in the course of the training programmes. During the discussions in the study commissions on the elaboration of the academic study regulations graduates in the respective study programmes, who were already active in their professions and representatives of varied interest groups were consulted to an increasing extent (see 2.7.1).

The General University Studies Act also includes for the first time principles for a uniform system of studies and examinations to be applied at all Austrian universities. This new system provides for a uniform arrangement and replaces the former, often vastly differing, study and examination systems of the individual fields of knowledge.

Academic study regulations and organization of studies

If the significance of the academic study regulations for the execution of university studies in Austria is to be correctly assessed, one has to bear in mind that university examinations also have the character of state examinations. This means that the completion of regular degree studies gives access to academic professions and that a further examination of acquired knowledge by the employer, be it the state or any other public corporation, will not take place, although there may be - under the terms of employment - later examinations deciding on promotion and advancement. Further attention should be drawn to the fact that the special studies acts since the adoption of the General University Studies Act have generally departed from the large-scale examinations before examination boards and have split up diploma examinations, partly also rigorosa, into individual examinations on the various examination subjects; in most study programmes these individual examinations have been divided in turn into part-examinations on the material taught in individual courses and into the acquisition of certificates that furnish proof of successful participation in exercise-type courses. Thus, a "cumulative" examination system has been introduced. The academic study regulation therefore specifies not only which courses have to be registered for in which sequence, but also the scope, time and sequence of examinations.

The academic study regulations have thus become the basis of the examination system (with the exception of the formal execution of examinations, which is regulated in the General University Studies Act in detail). Any change in the academic study regulation entails a change in the taking of examinations. In this context mention should be made of the fact that the more recent special studies acts provide for examinations before examination boards only for the second diploma examination as well as for the doctoral studies in the form of a "defensio" of the diploma thesis and the dissertation, respectively; within the scope of this "defensio" the subject of the scientific work as well as a second related subject are examined.

As a consequence of this dual character of the academic study regulations - curriculum, on the one hand, and rules governing examinations, on the other - delays in the issuance of the academic study regulations decisively influence the taking of examinations.

On the basis of the formal legal situation, studies and examinations would have to be pursued and taken, respectively, according to the old study rules until the new academic study regulations have acquired the force of law. In reality, however, the university - in full agreement with all groups of persons concerned - anticipates the intentions prior to their acquiring legal force and operates with academic study regulations, and thus also with rules governing examinations, which are not fully established in detail. In the study regulations to be issued the Federal Ministry of Science and Research formally sanctions such differences between the actual study process and the academic study regulations to be finally adopted. However, some uncertainty still continues to exist; it may lead to considerable difficulties if the issuance of the academic study regulations is delayed or even blocked by one of the groups represented in the study commissions. In that case the termination of studies and the awarding of an academic degree will become problematic.

Another difficulty lies in the fact that although at present the academic study regulations have to be made public by posting them on the official bulletin board of the respective academic authority and by announcing them in the university catalogue, students hardly have access to academic study regulations of previous years. The legal aspect of one question is still not fully clarified: If the academic study regulations were changed, is the student allowed to continue his studies under the old regulations or will the new ones apply?

In the General University Studies Act the legislator attempted to encourage the integration of the communication of knowledge and the examination of the students' academic achievement by expressly mentioning special modes of teaching the subject matter; conversatoria, work groups, privatissima and repetitoria are to be made part of the instruction process. Upon completion of such types of courses no special examination has to be taken on the subject matter covered. The academic achievement of the student will be evaluated on the basis of his participation in the work done during the course. Individual examinations on the subject matter covered, taken upon the completion of such courses, are increasingly abolished. Lectures are pushed into the background, and the close cooperation between university teachers and students and the participation in intensive courses, where individual problems of the study fields are treated in an exemplary manner, are emphasized. The student on his part must to certain degree acquire the basic knowledge himself, and he must, more than ever before, prepare for the participation in a course. (see also 2.5.3.)

The intensification of studies, the reduction of excessive duration of studies, the intensive care afforded to students in exercises, practicals, preparatory seminars, seminars and other exercise-type courses are absolute musts for a meaningful study reform. Yet, such courses in particular require the intensive participation of a relatively great number of highly qualified members of the academic intermediary staff, particularly university assistants, but also of civil servants in the scientific-administrative field and of other teachers. Therefore, provisions had to be made for an increase in the number of assistantships (see 2.9.3).

The freedom of studying (1)

While the Austrian Federal Constitution contains a provision on the freedom of teaching for university professors, the freedom of studying - the counterpart of the freedom of teaching - had not been laid down by law until the adoption of the General University Studies Act. This Act attempts to define the content of the freedom of studying as follows:

a) the right to choose freely, to register for, and to attend courses;

b) the right to choose freely, at the time of registration, among the faculty members teaching courses on the same subject;

c) the right to register at the same time for courses at different universities and Faculties;

d) the right to take voluntary examinations (Kolloquien) on the subject matter of the registered courses;

e) the right to use the teaching and research facilities of the university to which the student has been admitted;

f) The right to select, as a regular degree student, the topic of the diploma thesis from among a number of suggestions;

g) the right to suggest, as a candidate for the doctorate degree, the topic of the dissertation within the obligatory and alternative subjects of the study programme, and to ask a university professor to act as an advisor on the basis on his venia docendi;

h) the right to be admitted as a regular degree student to examinations and to acquire academic degrees.

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(1) On the question "Right to a study place" see 2.2.1

These fundamental provisions of the General University Studies Act were supplemented by various other provisions contained in the Act itself as well as by diverse provisions of the subsequent special studies acts in that the rights of students have been further developed. Particular mention should be made of the fact that the system of the academic study regulations, and thus also the rules governing the examinations to be taken within the scope of regular degree studies, have been made less rigid by a number of further provisions. The student has been given far-reaching rights to influence the organization of his studies.

The ministerial study regulations must provide for the possibility of alternative subjects. Particularly in the second section of studies the alternative subjects offer the possibility of specialization on the basis of the fundamental training that is required for all students. The student does not have to select a certain subject from a list of alternative subjects, but several groups of subjects, each of which offers a certain type of specialization, are open for selection.

Furthermore, the ministerial study regulations stipulate that the sum total of the number of hours of obligatory and alternative subjects be smaller than the overall number of hours of courses to be registered for. As concerns the difference - which as a rule is minimal - the students are free to choose the courses they want to register for as optional subjects. This measure was taken in the hope that the student will select courses in which he is really interested or which he expects offer a valuable contribution to his professional training or his general knowledge. Optional subjects that are credited include not only specialized courses of the student's study programme, but also any other courses of different study programmes, as well as courses in foreign languages and exercises in physical education.

Specialized areas permit the systematic specialization in the second section of studies on the basis of a uniform training in the fundamentals of a certain study programme.

Furthermore, the studium irregulare gives the individual student the possibility of organizing his studies himself (see 2.1.1). A group of ten regular degree students may (within the scope of the humanities and natural sciences) request the institution of a study experiment (see 2.1.1).

Additional analyses

The reform of the study rules pertaining to the Austrian institutions of higher learning, which was started in 1966 and has almost come to an end, has made use of the many years of experience gained with the old study regulations, most of which had remained unchanged for a number of years. Empirical reports were available not only from university teachers and students, but also from university graduates in these study programmes, concerning their success in their professional practice. In the reorganization of studies, however, provision had to be made for the fast recognition of changes in the studying conditions, in the respective field of knowledge or in the professional requirements, as well as for the possibility of adjusting the study rules to the changed situation. If one takes into consideration that a student requires four to six years for the completion of his studies in order to start his profession it becomes obvious that wrong assessments in the organization of study rules and in their execution can be recognized only at a time when considerable damage has already been caused. Therefore it was deemed necessary to obtain and evaluate information on the various factors that are important more than ever before for the permanent innovation of university studies. This is certainly a task that cannot be solved by the university administration alone.

Empirical reports on the professional success of university graduates of various study programmes in the political, economic and cultural fields and estimates of the future demand for graduates of such study programmes are important; yet, one must not overlook that investigations carried out with scientific methods and results which can be scientifically examined are hardly available. Such investigations are initiated, supported and sometimes even carried out by the Federal Ministry of Science and Research. Sponsored research for the analysis of problems connected with the study reform has already achieved a prominent position.

As concerns the acquisition of information on the study process at institutions of higher learning and the evaluation of such data, the General University Studies Act already contains some relevant provisions. It not only provides for the fundamentals of student statistics, but it also contains provisions as to the execution of immatriculation, registration and the keeping of examination records by means of modern technical facilities, in particular EDP installations. The introduction of EDP in the fields of immatriculation and registration has been completed at the Austrian institutions of higher learning; several institutions have tried out methods for keeping examination records and for the continuous observation of examination results and the duration of studies. In the course of the following years it will be necessary to introduce such methods at all universities.

2.1.3 Foundation of new universities, Faculties and study programmes

The foundation of new universities after World War II has always been accompanied by endeavours to harmonize local interests in the foundation of a new university at a certain place with national developmental schemes. The foundation of the Linz School of Economics and Social Sciences and the extension of the Salzburg Faculty of Theology into the University of Salzburg do not only meet the local interests, but helped to create academic training facilities which had, until then, been lacking in the central part of Austria.

The Linz School of Economics and Social Sciences was entrusted with the additional task of a special teaching and research institution in the fields of social and economic studies, which had been under-represented in Austria until then.

The Faculty of Civil Engineering and Architecture at the University of Innsbruck not only met a local request, but also constituted the only teaching establishment for technological subjects in Western Austria.

Finally, the new Klagenfurt School of Educational Sciences was assigned the task of concentrating its activities on educational sciences and thus assumed a national responsibility.

This coordination of national objectives and local interests is reflected in the way these new foundations are financed, i.e., by considerable funds from local authorities - Federal Provinces and municipalities.

Regular degree studies were taken up:

1964 University of Salzburg; Faculty of Arts and Sciences;
1965 University of Salzburg; Faculty of Law and Political Science;
1966 Linz School of Economics and Social Sciences; Faculty of Social and Economic Sciences and Law;
1969 Linz School of Economics and Social Sciences; Faculty of Technology and Natural Sciences;
1969 University of Innsbruck; Faculty of Civil Engineering and Architecture;
1973 Klagenfurt School of Educational Sciences.

At most of these new universities study programmes were instituted which had already existed at other universities. The Linz School started its academic activities when the Act on Social and Economic Studies came into force. This first special studies act after the General University Studies Act established new courses of study for which, however, there had already existed various predecessors, with the exception of the study programme of social economics. All the other study programmes were introduced at the Faculties of Law and Political Science and at the Vienna School of Economics instead of their predecessors.

Apart from a number of study programmes offered at the Faculties of Arts and Sciences, the Klagenfurt School of Educational Sciences introduced the new study programme of pedagogics and educational science as a study experiment.

The new foundations brought about some degree of relief for the existing facilities; furthermore, they led to a temporary additional recruitment of secondary-school graduates who would otherwise probably not have embarked upon university studies. There exist no exact statistical data on the quantitative aspect of these two developments. Yet, some clear indications as to their scope can be elaborated on.

In addition to the foundation of new universities, there are a number of parallel study programmes, which were newly established in order to meet regional demands.

Parallel programmes

The study programme "Technical Physics", which had previously only been offered at the Technical Universities of Vienna and Graz, was introduced in Linz in the winter semester 1970/71. The total number of students in this study programme amounted to 721 in the winter semester 1973/74 and has remained relatively constant since 1970/71. The increase in the number of persons studying "Technical Physics" at the Linz School has brought about corresponding decreases at the two "Technical Universities of Vienna and Graz. Since the winter semester 1969/70 "Technical Mathematics" has been offered not only at the Technical University of Vienna, but also at the Technical University of Graz and in Linz. The number of students in this study programme has almost doubled since 1969/70. The considerable increase in the total number of students registering for the first time is probably due to the new study programme. At the Technical University of Vienna the number of students has declined, while that in Graz has gone up, which points to a relief of the situation particularly by instituting the parallel programme at the Technical University of Graz.

Since 1969/70 "Architecture" and "Civil Engineering" have been offered at the University of Innsbruck as parallel programmes to those offered at the Technical Universities of Vienna and Graz. For years they have attracted an almost constant number of students. The introduction of the study programme "Architecture" in Innsbruck seems to have relieved the situation in Vienna as well as in Graz: the number of students of architecture declined by 6 to 7 percent at both Universities by 1973/74.

The institutions of the study programme "Civil Engineering" in Innsbruck relieved the situation particularly at the Technical University of Vienna. The share of students in "Civil Engineering" has gone down at the Technical University of Vienna, whereas it has remained constant at the Technical University of Graz.

Despite the introduction of the study programme "Law" in Salzburg (winter semester 1965/66) and Linz (winter semester 1966/67), the share of law students in the total number of Austrian regular degree students at universities has declined. As already pointed out, this development seems to be due to the institution of the study programmes of economics and social sciences. In the winter semester 1963/64 as many as 16 percent of all Austrian regular degree students were law students, but in 1973/74 only 8 percent were studying this subject. No significant changes occurred at the Universities of Vienna, Graz and Innsbruck, the three traditional law schools, during the period when the study programme "law" was introduced also in Salzburg and in Linz. Rather the situation at these universities was characterized by a constant, gradual decline in the relative and partly also in the absolute number of law students.

In summarizing we may say that the introduction of parallel study programmes at other universities leads to relief rather than expansion. In the case of social and economic studies the expansion of the regional offer is so closely linked with the study reform that no definite statements can be made. The development of the number of students at the Linz School of Economics and Social Sciences shows, however, both recruitment and relief effects.

Table 1: Number of Austrian regular degree students in parallel study programmes: by universities (winter semesters each)

	1966/67		1967/68		1968/69		1969/70		1970/71		1971/72		1972/73		1973/74	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
LAW																
University of Vienna	3,418	62	3,503	61	2,869	58	2,655	56	2,424	56	2,278	55	2,321	56	2,545	5
University of Graz	1,040	19	1,011	18	841	17	740	16	661	15	620	15	589	14	647	1
University of Innsbruck	688	12	635	11	530	11	472	10	415	9	365	9	389	10	431	10
University of Salzburg	249	5	317	6	426	8	461	10	428	10	405	10	383	9	394	9
Linz School of Economics and Social Sciences	125	2	230	4	310	6	392	8	420	10	438	11	444	11	427	10
Total	5,520	100	5,696	100	4,976	100	4,720	100	4,348	100	4,106	100	4,126	100	4,444	100
TECHNICAL PHYSICS																
Technical University of Vienna	562	79	556	79	524	77	491	75	480	71	466	68	471	69	483	67
Technical University of Graz	148	21	148	21	159	23	164	25	188	28	188	27	177	26	174	24
Linz School	-	-	-	-	-	-	-	-	11	1	33	5	35	5	64	9
Total	710	100	704	100	683	100	655	100	679	100	687	100	683	100	721	100
TECHNICAL MATHEMATICS																
Technical University of Vienna	170	100	196	100	272	100	328	86	399	76	430	68	453	66	431	61
Technical University of Graz	-	-	-	-	-	-	16	4	65	12	126	20	162	24	192	27
Linz School	-	-	-	-	-	-	37	10	65	12	78	12	66	10	83	12
Total	170	100	196	100	272	100	381	100	529	100	634	100	681	100	706	100
ARCHITECTURE																
Technical University of Vienna	1,174	67	1,208	65	1,146	67	1,082	65	1,040	63	994	64	1,007	[illegible]	994	59
Technical University of Graz	584	33	644	35	565	33	534	32	518	31	396	25	408	25	432	25
University of Innsbruck	-	-	-	-	-	-	47	3	93	6	163	11	214	13	272	16
Total	1,758	100	1,852	100	1,711	100	1,663	100	1,651	100	1,553	100	1,629	100	1,698	100
CIVIL ENGINEERING																
Technical University of Vienna	794	68	809	67	743	65	694	63	657	58	620	55	631	53	621	49
Technical University of Graz	382	32	402	33	397	35	358	32	371	33	338	30	355	30	393	31
University of Innsbruck	-	-	-	-	-	-	55	5	101	9	166	15	209	17	259	20
Total	1,176	100	1,211	100	1,140	100	1,107	100	1,129	100	1,124	100	1,195	100	1,273	100

It should be investigated under which conditions an expansion of the total number of students is parallelled by relief effects. It seems to be certain that study programmes in which the number of students had been stagnating or declining are mainly relieved by the institution of prallel programmes.

New study programmes

In the period under report a number of study programmes were newly instituted, above all economics and social sciences and some technical study programmes. In the winter semester 1969/70 two new study programmes were introduced at the Technical University of Vienna and at the Linz School of Economics and Social Sciences: "Informatics" (1) and as short-cycle studies (four semesters) "computation methods". Since the winter semester 1973/74 informatics has also been offered at the University of Vienna.

The short study of computation methods for which no academic degree is awarded (offered at the Technical University of Vienna as well as at the Linz School since the winter semester 1969/70), are hardly affected by the general increase in the number of students (in the winter semester 1973/74 153 students, almost all of them studying in Vienna). Parallel to the stagnation in the number of students as a whole, the number of students registering for the first time has declined since the winter semester 1970/71. At present, 88 percent of the students of computation methods are enrolled in Vienna. The study programme of informatics is frequented by 450 students three years after its institution. In view of the declining number of students of technical programmes the development in informatics is atypical and suggests that this subject is highly attractive for students.

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(1) The study programme of "informatics" was first offered at the Technical University of Vienna only in the winter semester 1970/71.

The study programme of "Urban and Regional Planning" instituted in 1970/71 is in its developmental stage. 45 Austrian regular degree students were registered for it in the winter semester 1973/74. Whereas in the study programmes so far discussed the increase in the number of students was essentially due to students registering for the first time or beginners, "urban and regional planning" is, of course, an exception: it is only taken by students who have already completed the first section of studies in other study programmes.

Table 2: Number of students registering for the first time for new technical study programmes (Austrian regular degree students, 1969/70-1973/74)

	1969/70	1970/71	1971/72	1972/73	1973/74
Computation methods	40	56	31	42	27
Technical University of Vienna	36	54	27	32	21
Linz School of Economics and Social Sciences	4	2	4	10	6
Informatics	25	83	108	112	101
Technical University of Vienna	-	37	64	76	61
Linz School of Economics and Social Sciences	25	46	44	36	26
University of Vienna	-	-	-	-	14
Plastics Engineering	-	40	49	27	13
Material Engineering	-	1	8	4	5
Urban and Regional Planning (1)	-	16	31	40	45

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(1) Students in their second section of studies

The Leoben School of Mining and Metallurgy has experienced a considerable increase in the number of students registering for the first time, which is mainly due to the new study programmes introduced in 1969/70; the doubling of the number of students registering for the first time in the winter semester 1970/71 can be attributed almost exclusively to the number of students frequenting the successful new study programmes. In the past two semesters, however, there has been a substantial decline in the number of students registering for the first time.
"Materials Engineering", introduced in 1969/70, is gaining ground only rather slowly; at present there are 31 students.

In 1966 the social and economic studies were re-organized and new study programmes were introduced.

Predecessors	Social and economic study programmes
international trade and commerce	business administration
political science	economics
economic science	social economics sociology commercial sciences social and economic statistics commercial education

The institution of the new study programmes increased regional supply facilities in social sciences and economics, especially as a result of the foundation of the Linz School of Economics and Social Sciences.
In its initial phase the number of students in the social and economic study programmes in general increased considerably (the development in the individual study programmes is not taken into consideration).

The introduction of the social and economic study programmes has, however, not entailed major shifts in the interest of students in social sciences and economics. Considering the overall development of economic studies - and its predecessors - we see that the share of students in this particular field of study has only slightly risen from 14 percent to some 16 percent with regard to the total number of students. The increase in the number of students of economics and social sciences might be due to a shift in the interest of the students from law to economics and social sciences, as the share of law students in the total number of students has been continuously decreasing for years.

In viewing this connection one must take into consideration that the course offerings in economics and social sciences have been much more diversified since the new studies act was passed. However, it cannot be ruled out that the general development would not have been so expansive without the reform of the social and economic study programmes and without the expansion of regional supply facilities.

Table 3: Number of students of social and economic sciences or their predecessor study programmes since the winter semester 1960/61 (Austrian regular degree students)

		1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/86	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
Social and economic study programmes	number	-	-	-	-	-	-	(2)	2,922	3,131	4,303	5,498	6,750	8,240	8,541
	in %(1)	-	-	-	-	-	-	-	7	8	11	13	14	16	15
	Index	-	-	-	-	-	-	-	100	107	147	188	231	282	306
Predecessors of social and economic study programmes	number	3,870	4,020	4,545	5,340	5,150	5,319	(2)	3,135	1,852	1,400	938	709	585	457
	in %	14	13	13	15	14	14	-	8	5	3	2	2	1	1
	Index	100	104	117	138	133	137	-	81	48	36	24	18	15	12
Total	number	3,870	4,020	4,545	5,340	5,150	5,319	4,871	6,057	4,983	5,703	6,436	7,459	8,825	9,398
	in %	14	13	13	15	14	14	13	15	13	14	15	16	17	16
	Index	100	104	117	138	133	137	126	157	129	147	166	193	228	243
Total number of Austrian regular degree students	number	27,237	30,848	33,984	36,387	37,366	38,057	37,899	41,268	39,377	40,899	43,122	46,950	53,158	58,613
	Index	100	113	125	134	137	140	139	152	145	150	158	172	195	215

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(1) Share in the total number of Austrian regular degree students

(2) A break-down of the student figures for the winter semester 1966/67 is not possible

Generally, we can say that during the period under review the number of students in the social and economic study programmes were increasing, while the number of students registering for the first time were somewhat declining or stagnating during the past few years. These two trends suggest an increase in the duration of studies.

Table 4: Number of students registering for the first time in social and economic study programmes: by study programmes (Austrians)(winter semesters each)

Study programme	1967/68		1968/69		1969/70		1970/17		1971/72		1972/73		1973/74	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sociology	48	5	58	6	26	2	42	3	57	4	58	4	43	4
Social economy	19	2	5	1	5	1	5	.	1	-	13	1	10	1
Economics	187	20	146	14	124	11	130	10	157	11	189	13	166	14
Business administration	392	42	549	54	647	57	793	61	800	55	793	54	588	50
Commercial sciences	284	31	206	20	283	25	273	21	306	21	280	19	237	20
Commercial education	-	-	30	3	31	3	59	4	100	7	102	7	103	9
Social and economic statistics	-	-	19	2	12	1	8	1	21	2	22	2	17	2
Total	930	100	1,013	100	1,128	100	1,310	100	1,444	100	1,457	100	1,164	100
Index development	100		109		121		141		155		157		125	

Table 5: Number of Austrian regular degree students in social and economic study programmes: by study programmes (winter semesters each)

Study programme	1967/68 No.	%	1968/69 No.	%	1969/70 No.	%	1970/71 No.	%	1971/72 No.	%	1972/73 No.	%	1973/74 No.	%
Sociology	157	5	217	7	219	5	234	4	305	4	306	4	382	4
Social economy	78	3	66	2	54	1	59	1	52	1	68	1	70	1
Economics	616	21	708	23	870	20	922	17	1,065	16	1,243	15	1,381	15
Business administration	1,212	41	1,474	47	2,206	51	3,032	55	3,759	56	4,550	55	4,843	54
Commercial sciences	808	28	552	18	756	18	954	17	1,131	17	1,403	17	1,424	16
Commercial education	51	2	73	2	120	3	218	4	332	5	480	6	689	8
Social and economic statistics	-	-	41	1	78	2	79	2	106	1	130	2	152	2
T o t a l	2,922	100	3,131	100	4,303	100	5,498	100	6,750	100	8,240	100	8,941	100
Index development	100		107		147		188		231		282		306	

More than 50 percent of the students decide upon business administration. Tables 4 and 5 reveal that the percentage of students of business administration has somewhat declined over the past few years. In the winter semester 1970/71 the percentage of first registrations was 61 percent, while it declined to 50 percent in the meantime.

50 percent of the students of business administration study at the Vienna School of Economics, nearly 20 percent at the University of Graz, and about 12 percent at the University of Innsbruck.

Table 6: Number of Austrian regular degree students of business administration by universities (winter semesters)

		1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
University of Graz	number	112	244	385	560	717	792	858
	in %	9	17	17	19	19	17	18
University of Innsbruck	number	86	140	221	348	446	543	601
	in %	7	9	10	11	12	12	12
Vienna School of Economics	number	728	693	1,091	1,490	1,839	2,323	2,489
	in %	60	47	50	49	49	51	51
Linz School of Economics and Social Sciences	number	286	397	509	634	757	892	895
	in %	24	27	23	21	20	20	19
Total	number	1,212	1,474	2,206	3,032	3,759	4,550	4,843
	in %	100	100	100	100	100	100	100
	index	100	122	182	250	310	375	400

Table 7: Number of students registering for the first time in business administration: by universities (Austrian regular degree students) winter semesters

		1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
University of Graz	number	55	97	83	148	145	119	118
	in %	14	18	13	19	18	15	20
University of Innsbruck	number	33	36	59	97	91	91	67
	in %	8	7	9	12	11	12	12
Vienna School of Economics	number	207	287	366	400	398	413	290
	in %	53	52	57	50	50	52	49
Linz School of Economics and Social Sciences	number	97	129	139	148	166	170	113
	in %	25	23	21	19	21	21	19
Total	number	392	549	647	793	800	793	588
	in %	100	100	100	100	100	100	100
	index	100	140	165	202	204	202	150

Whereas the percentage of students registering for the first time at the Vienna School of Economics and at the Linz School has declined since the winter semester 1967/68, the percentage pertaining to the Universities of Graz and Innsbruck sharply increased (see Table 7).

The study programme of commercial science is only offered at the Vienna School of Economics. It is the second most frequently selected study programme in this field. But its share in the total number of students declined from 28 to 16 percent and the share in the number of students registering for the first time from 31 to 20 percent.

Economics ranks third with a share of 15 percent of the total number of students in this field. As can be seen from Table 4 the percentage of students registering for the first time in economics is on the increase again, after it had decreased from 20 to 10 percent between the winter semester 1967/68 and 1970/71.

Table 8: Number of Austrian regular degree students of economics: by universities (winter semesters)

		1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
University of Vienna	number	151	204	335	375	499	631	759
	in %	24	29	39	41	47	51	55
University of Graz	number	167	155	131	122	106	99	91
	in %	28	22	15	13	10	8	7
University of Innsbruck	number	131	180	203	203	220	253	263
	in %	21	25	23	22	21	20	19
Vienna School of Economics	number	113	107	130	141	147	164	164
	in %	18	15	15	15	14	13	12
Linz School of Economics and Social Sciences	number	54	62	71	81	93	96	104
	in %	9	9	8	9	9	9	8
Total	number	616	708	870	922	1,065	1,243	1,381
	in %	100	100	100	100	100	100	100
	index	100	115	141	150	173	202	224

Nearly 60 percent of students registering for the first time in the study programme of economics began their studies at the University of Vienna in the winter semester 1973/74, whereas the respective share of the winter semester 1967/68 was only somewhat more than 20 percent. This marked increase reduced the shares at the University of Graz (from 23 percent to 5 percent) and at the University of Innsbruck (from 33 percent to 19 percent). The relevant shares of the Vienna School of Economics and the Linz School of Economics and Social Sciences remained about the same, i.e., 12 percent and 6 percent, respectively.

Table 9: Number of students registering for the first time in economics: by universities (Austrian regular degree students) winter semesters

		1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
University of Vienna	number	40	36	41	59	76	104	97
	in %	21	25	33	45	48	55	58
University of Graz	number	43	13	12	9	13	13	8
	in %	23	9	10	7	8	7	5
University of Innsbruck	number	61	57	41	35	31	26	32
	in %	33	39	33	27	20	14	19
Vienna School of Economics	number	29	31	22	23	25	27	19
	in %	15	21	18	18	16	14	12
Linz School of Economics and Social Sciences	number	14	9	8	4	12	19	10
	in %	8	6	6	3	8	10	6
Total	number	187	144	124	130	157	189	166
	in %	100	100	100	100	100	100	100
	index	100	77	66	69	84	101	89

Commercial education, a study programme leading to the secondary school teaching qualification, is gaining in popularity with students. In the winter semester 1967/68 only two percent of the students of economics and social sciences registered for this study programme, whereas the percentage rose to 8 percent in 1973/74. Two thirds of the students of commercial education study at the Vienna School of Economics, one third at the Linz School (which has offered this programme since the winter semester 1970/71).

Table 10: Austrian regular degree students and students registering for the first time in the remaining social and economic study programmes: by universities (winter semester 1973/74)

		Regular degree students				Students registering for the first time			
		Univ. of Vienna	Vienna School of Economics	Linz School	Total	Univ. of Vienna	Vienna School of Economics	Linz School	Total
Sociology	number	192	-	190	382	14	-	29	43
	in %	50	-	50	100	33	-	67	100
Social economy	number	-	-	70	70	-	-	10	10
	in %	-	-	100	100	-	-	100	100
Commercial sciences	number	-	1,424	-	1,424	-	237	-	237
	in %	-	100	-	100	-	100	-	100
Commercial education	number	-	455	234	689	-	77	26	103
	in %	-	66	34	100	-	75	25	100
Social and economic statistics	number	123	-	29	152	16	-	1	17
	in %	81	-	19	100	94	-	6	100

The study programmes of sociology, social economy and social and economic statistics were not very attractive to students.

Sociology accounts for 4 percent of all students of economics and social sciences. Of these 50 percent study at the University of Vienna and 50 percent at the Linz School. However, this study programme meets with some competition from the institution of the study experiment in sociology at the Faculty of Arts and Sciences.

Social and economic statistics has been offered in Linz since the summer semester 1968 and at the University of Vienna since the winter semester 1968/69. It accounted for about two percent of all students of economics and social sciences. The number is rising only at the University of Vienna; in Linz it has been stagnating for quite some time. In the winter semester 1973/74 four fifths of all students of statistics studied at the University of Vienna while only one fifth attended the Linz School.

The least successful study programme is social economy, which is offered only at the Linz School. At present only 1 percent of all the students of economics and social sciences are enrolled in this study programme; in the winter semester 1967/68 there were still three percent.

The Linz School of Economics and Social Sciences

In the winter semester 1966/67 academic activities were started at the Linz School of Economics and Social Sciences with the social and economic study programmes and law. 562 students were already registered in the first semester, 125 of whom in law. 251 of the students registered for the first time at an Austrian institution of higher learning. A relatively large number of registrations in the first semester were therefore re-registrations. The number of students registering for the first time increased considerably until the winter semester 1972/73 - by almost 100 percent; the percentage was thus much higher than the total increase in the overall number of students registering for the first time. In the winter semester 1972/73 some 500 students registered for the first time at the Linz School, i.e. slightly more than five percent of the total number of students registering for the first time in Austria. In the winter semester 1971/72 the Linz School accounted for almost six percent of all students registering for the first time; its share has since shown a falling tendency.

Table 11: Austrian regular degree students registering for the first time at the Linz School of Economics and Social Science, 1967/68 to 1973/74

Academic year	Social and Economic studies			Law			Technical study programmes (1)			Total (2)		
		of these:			of these:			of these:			of these:	
	Total	Linz	in %	Total	Linz	in %	Total	Linz	in %	Total	Linz	in %
1967/68 (3)	931	157	17	780	94	12	127	-	-	1,839	251	14
1968/69	1,013	181	18	763	84	11	178	-	-	1,954	265	14
1969/70	1,128	164	15	565	70	12	313	80	26	2,006	314	16
1970/71	1,310	193	15	597	77	13	469	132	28	2,376	402	17
1971/72	1,442	265	18	577	75	13	504	146	29	2,523	486	19
1972/73	1,457	288	20	615	75	12	447	125	28	2,519	488	19
1973/74	1,164	189	16	758	72	10	418	130	31	2,340	392 (4)	17

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(1) Only study programmes offered at the Linz School

(2) A study was prepared for the Federal Ministry of Science and Research on the bases and intentions underlying the institution of the Linz School, particularly in connection with the social and economic study programmes: Pichler H., Die Sozial- und Wirtschafts wissenschaftlichen Studien in Österreich, Linz 1973, research report, mimeographed.

(3) Prior to the winter semester 1967/68 no statistics were kept on students registering for the first time.

(4) including one "studium irregulare"

Eight years after the university foundation there are 2,500 Austrian regular degree students studying in Linz, i.e. four percent of all Austrian regular degree students. The number of foreign students is negligible; in the past few years there have always been some 80 foreign students. The Linz School has the smallest percentage of foreign students.

17 percent of all students studying economics and social sciences (1) and 10 percent of all law students are studying in Linz. The Vienna School of Economics has, however, succeeded in maintaining its dominating position (with regard to the number of students) to a large extent.

The technical study programmes offered in Linz are at present frequented by 559 Austrian regular degree students, i.e., 23 percent of the students of corresponding study programmes.

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(1) Without the students of expiring study programmes.

Table 12: Austrian regular degree students at the Linz School of Economics and Social Sciences: by study programmes;winter semester 1973/74

Study programmes	number	in %	Share of the Linz students in total number of students of the study programme (1)	
			share in %	number of students (Austrians total
Economics and social sciences	1,522	61	17	8,941
sociology	190	8	50	382
social economy	70	3	100	70
economics	104	4	8	1,381
business administration	895	36	18	4,943
commercial education	234	9	34	689
social and economic statistics	29	1	19	152
Law	427	17	10	4,444
Technical study programmes	559	22	23	2,446
technical physics	64	3	9	721
secondary school teaching qualification for mathematics and physics	223	9	61	368
technical mathematics	83	3	12	706
computation methods	19	1	12	153
informatics	170	7	34	498
Linz School of Economics and Social Sciences (including two cases of "studium irregulare")	2,510	100		

The regional feeding area for the Linz School has from the beginning been restricted to Upper Austria and the adjacent Federal provinces (see also 2.1.4).

The share of Upper Austrian students in the total student population has always amounted to about 85 percent, with the remaining 15 percent of students mainly coming from Lower Austria and Salzburg.

The geographic position of Linz seems to play a decisive role. This assumption is supported by the high percentage of students from Upper Austria and also by the fact that, e.g., more than one-third of Lower Austrian students studying in Linz come from the political district of Amstetten bordering on Upper Austria. Most Salzburg students studying in Linz come from the city of Salzburg and from the political district "Salzburg-Umgebung" (Salzburg-sorroundings).

Students from more distant Federal provinces seem to be attracted by Linz only to a minor degree.

Students from Federal provinces which do not have an institution of higher learning offering the study programmes represented in Linz choose the capital of Upper Austria as their place of study only in very rare cases.

Table 13: Students at the Linz School of Economics and Social Sciences: by Federal provinces, 1966/67 - 1973/74

Federal provinces	1966/67	1967/68	1970/71	1971/72	1972/73	1973/74
Burgenland	0.2 (1)	0.2 (1)	0.2 (1)	0.2 (1)	0.1 (1)	0.1 (1)
Carinthia	1.5	1.5	0.9	0.7	0.8	0.9
Lower Austria	3.4	3.9	4.9	4.7	4.9	4.8
Upper Austria	87.7	86.2	84.5	85.3	85.3	85.5
Salzburg	3.2	4.2	4.7	5.0	5.4	5.2
Styria	1.1	0.5	0.7	1.0	0.8	1.0
Tyrol	0.4	0.5	0.8	0.7	0.7	0.5
Vorarlberg	0.4	0.9	1.1	1.0	1.1	1.0
Vienna	2.2	2.3	2.0	1.4	1.1	1.1
Austria	100.0	100.0	100.0	100.0	100.0	100.0

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(1) Columns do not always total 100 %.

72 percent of the students from Upper Austria studying at the Linz School come from the high-density area of Linz-Wels-Steyr in Upper Austria which holds 45 percent of the Upper Austrian population.

A study, conducted in 1967, proved that the foundation of the Linz School led to short-term relief and recruitment effects. (1) The sudden, although not heavy increase in the share of Upper Austrian students in the total student population in the foundation year suggests recruitment effects caused by the foundation of the Linz School. Since the winter semester 1966/67 there has been an above-average increase in the number of Upper Austrian students as compared to the overall development. The available statistical data, however, do not allow the determination of the extent to which this development reflects a nation-wide trend toward extending the recruitment basis of the universities. There is a higher or equal increase in the number of students in some Federal provinces during this period. Quantitatively, this recruitment effect is, however, of negligible importance.

The foundation and the extension of the Linz School have resulted in relieving the situation for other universities. An estimated number of 300 to 400 students registering for the first time, who would otherwise study at any other universities, have enrolled at the Linz School since the winter semester 1969/70. The Linz School has been attracting about one quarter of Upper Austrian students since the termination of the initial stage.

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(1) Bodzenta E., and others, Effekte der Hochschulgründung in Linz, Linz 1968, research report for the then Minister of Education.

The Klagenfurt School of Educational Sciences (1)

In 1970 the School was founded by a Federal Act (BGBl. Nr. 48/1970). The initial stage, envisaged by law, lasted for three years. Regular studies were started with 238 registered students in the winter semester 1973/74.

Table 14: Students at the Klagenfurt School of Educational Sciences (winter semester 1973/74)

	regular degree students	non-degree students	auditing students	total
Austrians	230	13	2	245
foreigners	8	1	1	10
total	238	14	3	255

In comparison, the Linz School of Economics and Social Sciences took up teaching in 1966 with 562 regular degree students and an offering of six study programmes.

Upon termination of the initial stage, regular diploma studies were instituted at the Klagenfurt School in accordance with the Federal Act on the Humanities and the Natural Sciences. In the course of the consulting and planning activities of the first stages of development it was recognized that the School of Educational Sciences must not be changed into a Faculty of Arts and Sciences, not even if studies have to be organized according to the provisions of the Federal Act on Humanities and Natural Sciences.

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(1) Partly taken over from: Bundesministerium für Wissenschaft und Forschung, Die Vollendung der Aufbaustufe der Hochschule für Bildungswissenschaften in Klagenfurt, Vienna 1973

The School's concentration on educational sciences is guaranteed by a harmonious development of the basic and specialized disciplines of educational sciences.
In order to facilitate the reorganization of teacher training particularly according to the objectives of the parties responsible for the reform of universities, at first only a certain number of study programmes will be instituted, which will, however, be at once fully operational.

The following study programmes were started in the winter semester 1973/74, each beginning with the first semester:

a) "German philology" with the areas:
    aa) "German Philology"
    bb) "German Philology (secondary-school teaching qualification)"

b) "Romance philology" with the study areas:
    aa) "French"
    bb) "French (secondary-school teaching qualification)"
    cc) "Italian"
    dd) "Italian (secondary-school teaching qualification)"

c) "English and American language and literature" with the study areas:
    aa) "English and American language and literature"
    bb) "English and American language and literature (secondary-school teaching qualification)"

d) "Slavic philology" with the study areas:
    aa) "Russian"
    bb) "Russian (secondary-school teaching qualification)"
    cc) "Slovene"
    dd) "Slovene (secondary-school teaching qualification)"

e) "Philosophy, pedagogics and psychology (secondary-school teaching qualification)"

f) "Pedagogics and educational sciences" as a study experiment in accordance with section 19 of the Federal Act on the Humanities and Natural Sciences.

The relevant ministerial study regulations were prepared by the Federal Ministry of Science and Research in agreement with the Federal Ministry of Education and Art on the basis of suggestions made by the Klagenfurt School of Educational Sciences. Requests for innovations submitted by the Klagenfurt School of Educational Sciences were considered within the limits of the statutory regulations. The division into various study areas is effected in the second section of studies according to the provisions of the Federal Act on the Humanities and Natural Sciences. Within the framework of all those disciplines which have already been established at the Klagenfurt School of Educational Sciences as study programmes aiming at the secondary-school teaching qualification, in the future study programmes should be established which do not lead to the secondary-school teaching qualification.

At the Klagenfurt School natural sciences can be considered neither in the initial stage nor during the extension stage. The development of the contents and methods of teaching is especially hectic in the natural sciences. The possibility of introducing certain subjects of natural sciences with special emphasis on their didactic aspects, and some specific study programmes of natural sciences upon completion of the extension stage (that is 1980 the earliest) should be considered in the first planning stages of the School. The establishment of expensive research laboratories will, however, not be possible in this connection;

practicals for the secondary-school teaching qualification should constitute the essential experimental objective.

One of the most important innovations of the above mentioned Federal Act is the possibility of study experiments. The Klagenfurt School of Educational Sciences, which the foundation law entrusted with scientific research and teaching in the field of educational sciences, makes use of study experiments and has established the study programme "pedagogics and educational sciences" as a study experiment. This study experiment permits a reorganization of the subject matter of said course of studies and the experimental testing of new didactic principles of higher education. Beginning with the first semester students at the Klagenfurt School of Educational Sciences will, according to the present ministerial study regulations, be acquainted with the interdisciplinary approach to problems of pedagogics and educational sciences.

Students at the Klagenfurt School in the study programme "pedagogics and educational sciences" receive professional training in a subject for the secondary-school teaching qualification; in addition they have to specialize in the field of pedagogics and educational sciences, thereby obtaining the qualification for a profession that is entirely new in Austria. The basic training in the first section of studies, especially in curriculum research, media didactics, pedagogical psychology, pedagogical sociology and educational economics enables the student in his second section of studies to achieve a degree of specialization by selecting two from a large number of basic programmes of educational sciences which cannot be achieved in any other study programme. In the second section of studies the student may choose programmes according to his personal interests and his specific wishes as to his future career; besides systematic studies in pedagogics and educational sciences the student deals with preschooling, adult education, educational economics, media didactics, curriculum research or pedagogical psychology within the framework of his first and second alternative subjects.

In the discussion on the draft for the ministerial study regulation governing the study experiment "Pedagogics and educational sciences" the following fundamental aspects were taken into consideration:

a) The study experiment is a combined course of studies. The student has to combine the study experiment - his first study programme - with his studies for the secondary-school teaching qualification - his second study programme. In order to ensure that graduates from this study experiment qualify for employment as secondary-school teachers, the ministerial study regulation requests the student to effect the studies for the secondary-school teaching qualification (second study programme) according to the requirements of the first study programme. The diploma thesis has to be written in a subject of the study experiment.

b) The envisaged experiment should not prevent the student from embarking upon short-cycle studies.

c) The study experiment excludes the possibility laid down in the Federal Act on the Humanities and Natural Sciences to exchange at the time of the second diploma examination 50 percent of the subjects against subjects which form part of the studies leading to the secondary-school teaching qualification. This possibility is excluded on the grounds that the second section of studies offers a great number of possible choices and that additional choices might endanger the regular and systematic course of study.

d) The admission prerequisites laid down in the "Hochschulberechtigungsverordnung" (University Admission Regulations) which apply to the study programme "pedagogics, psychology and philosophy"(secondary-school teaching qualification), also apply to the study experiment in order to have a basis for comparison.

e) The possibility of project studies was included in the study experiment.

The further extension, the introduction of more study programmes,is effected in close cooperation with the Federal Ministry of Education and Art.

Students in the study programme "pedagogics and educational sciences"at the Klagenfurt School of Educational Sciences come from all over Austria (there were 21 Austrian regular degree students in the winter semester 1973/74). Today, one year after the commencement of regular courses, one cannot say whether the students came from other universities or whether additional students were recruited. The regional impact of the School will probably rise considerably in the course of the years to come; in the first semester 95 percent of the students were Austrian regular degree students.

2.1.4 Regional Distribution

Three of Austria's nine Federal Provinces have no institution of higher learning, namely Lower Austria, Burgenland and Vorarlberg. Secondary-school graduates from these Federal Provinces who want to study at a university go to other Federal Provinces. This group comprises more than 11,000 students, i.e., one fifth of all Austrian regular degree students (winter semester 1973/74).Because of the close proximity of Vorarlberg to Tyrol (the University of Innsbruck) and of Burgenland and Lower Austria to Vienna, most students from these regions attend the institutions of higher learning in Innsbruck and Vienna, respectively. 62 percent of all the students from Vorarlberg attend the University of Innsbruck, 85 percent of all the students from Burgenland and as many as 94 percent of all Lower Austria students study at one of Vienna's institutions of higher learning.
Carinthia holds a special position. The School of Educational Sciences in Klagenfurt started regular operation only in the winter semester 1973/74. About 40 percent of the Carinthian students study in Styria and another 40 percent in Vienna. In Vienna there are five universities, in Styria three, in Tyrol, Salzburg and Upper Austria one each. The importance of the individual institutions varies regionally. 98 percent of all Viennese students, 85 percent of the Styrian students, 80 percent of the Tyrolean students, 40 percent of the Salzburg students, and 25 percent of the Upper Austrian students study in their home Provinces. These differences seem to be due to the varying degrees of educational possibilities and traditional preferences for individual university towns.

One of the consequences of the great variety of educational opportunities offered in Vienna is the fact that 58 percent of the total student population and 36 percent of all Austrian regular degree students study in Vienna.

The supraregional importance of Vienna as a university town also becomes clear from the fact that nearly 50 percent of all students enrolled in Vienna come from the Federal Provinces; at the Vienna School of Veterinary Medicine the percentage of students from the Federal Provinces amounts to as many as 73 percent.

The status of Vienna as a university town is changing, however. The annual decrease in the number of students at the Viennese institutions of higher learning has been 1 percent over the last 5 years. This change is also clearly reflected in the number of students registering for the first time. The percentage of students registering for the first time in Vienna dropped from 61 percent in the winter semester 1967/68 to 55 percent in the winter semester 1973/74. The University of Vienna, however, is an exception. In the winter semester 1971/72 the percentage of students registering there for the first time was the lowest in many years (32 percent), whereas in the winter semester 1973/74 the percentage of 1967/68 (37 percent) had nearly been reached again.

From a national point of view the importance of Vienna as a university town (measured by the number of registered students) is on the decline, but the registration figures for the University of Vienna, Austria's largest university, are rising again, after several recessions. The relative relief for Vienna's institutions of higher learning, brought about by universities in the Federal Provinces thus does not affect the University of Vienna per se, which already handles one third of all students (or about 60 percent of all students in Vienna).
The easiest way to assess the regional or supraregional importance of an institution of higher learning or of a university town is to determine the percentage of the students coming from the region concerned in the total (Austrian regular degree) student population at the respective institution of higher learning or university town;

the lower the percentage, the greater the institution's supraregional importance.

At the Linz School of Economics and Social Sciences 85 percent of the students are from Upper Austria; 65 percent of the students at the Styrian institutions of higher learning are from Styria, about 50 percent of the students at the Viennese institutions of higher learning are Viennese, 49 percent of the students in Innsbruck are from Tyrol; yet only 35 percent of the students at the University of Salzburg are from Salzburg.

2.2 ATTENDANCE

2.2.1 Right to tertiary education

Access to the universities and art schools in Austria, the right to scientific professional training, education through science and the further education of graduates from the institutions of higher learning - in the light of the progress of science - are regulated by:

- the (European) Convention for the Protection of Human Rights and Basic Freedoms and Article 2, first sentence of the First Protocol to the Convention for the Protection of Human Rights and Basic Freedoms (The Republic of Austria acceded to the Human Rights Convention of November 4, 1950, and to the First Protocol of March 20, 1952, in 1958 (1). In 1964, the entire Convention was accorded a status equal to that of the Austrian Constitution). (2)
- Article 18 of the "Staatsgrundgesetz of 1867" (Basic Law of 1867 on the General Rights of Nationals) (3) ("Everyone shall be free to choose his occupation and to obtain the necessary education and training therefor, how and where he wants."); Article 17 of the "Staatsgrundgesetz" ("Science and teaching shall be free").
- the General University Studies Act of 1966 on the Studies at Universities (4), and supplementary legal provisions pertaining to tertiary education and the organization thereof.

The General University Studies Act regulates the access of Austrian nationals, foreigners and stateless persons to the universities, where they can enrol as regular degree students, non-degree students and auditing students.

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(1) BGBl. Nr. 210/1958
(2) BVG.BGBl. Nr. 59/1964
(3) RGBl. Nr. 142/1867
(4) BGBl. Nr. 177/1966

Under the General University Studies Act, the prerequisite for the commencement of studies is the admission to the university community as a regular degree student (As concerns the internal set-up, this clearly emphasizes the corporate nature of the university; as for outside relations, it underlines the institutional character of the universities as defined in section 1 of the University Organization Act of 1955 (1)) by way of immatriculation; non-degree students and auditing students shall be admitted through the Rector. (2

- Regular degree students:

  Under the General University Studies Act, degree students are those who desire to terminate regular degree studies (diploma studies and doctoral studies, regulated by special studies acts) and to be admitted to the examination provided therefor. Admission shall be effected by way of immatriculation at the university providing the desired study programme.

  The immatriculation shall take place at one university only; the pursuance of several regular degree studies at different universities at the same time shall be admissible only if no conflicts arise on the basis of the academic study regulations.

- Auditing students:

  University graduates who have terminated their regular degree studies by taking the prescribed examinations and who desire to attend courses for a certain period of time without entering upon new regular degree studies shall be admitted as auditing students.

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(1) BGBl. Nr. 154/1955

(2) See General University Studies Act, BGBl. Nr. 177/1966 sections 4, 6 and 9. The provisions pertaining to the individual student categories are included in sections 6, 9, 13, 15, 35, 36.

- Non-degree students:

  Persons who have reached the age of 18 and who desire to attend courses for a certain period of time shall be admitted as non-degree students if they have the necessary prerequisites. With respect to "Hochschulkurse" and "Hochschullehrgänge" the age limit may be reduced to the completed 15th year of age.

Non-degree students and auditing students shall be admitted by the Rector on the basis of available place. They shall not be admitted to the examinations of the regular degree students, but they shall be entitled to take voluntary examinations (Kolloquien), supplementary examinations, as well as examinations of the "Hochschulkurse" and "Hochschullehrgänge".
The admission may be denied if the applicant constitutes a disturbance to instruction or a danger to his environment because of his state of health, or if he cannot acquire an academic degree on grounds of penal provisions (exceptions can be made by the Rector).

Access to the universities:

- Austrian nationals:
  Austrian nationals shall be entitled to attend a university after passing the leaving examination at an Austrian general secondary school, or at an Austrian secondary technical and vocational school, or at an Austrian secondary agricultural and forestry school. (1) The "Berufsreifeprüfung" is a special entrance examination held by the university itself (see section 2.2.5). Secondary-school leaving certificates obtained at a foreign school shall be recognized as being equivalent to a leaving certificate issued by an Austrian secondary school. (2)

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(1) According to the provisions of sec. 41, subsec. 2, and sec. 69, subsec 2 of the School Organization Act, BGBl. Nr. 242/1962.

(2) General University Studies Act, sec. 7, subsec. 5.

- Foreigners and stateless persons:
  Foreigners (stateless persons) shall be immatriculated as regular degree students if they submit a certificate equivalent in type and level to an Austrian secondary-school leaving certificate. (1) (See European Convention on the Equivalence of Diplomas Leading to Admission to Universities, BGBl.Nr. 44/1957).
  The immatriculation of foreigners (stateless persons) at Austrian universities shall be effected on the basis of available place and according to the levels of achievement. The immatriculation shall be denied, if the applicant would not be permitted to enter upon or continue the studies in his mothercountry because of the absence of the required academic success.

Austrian nationals have a right to be admitted to regular degree studies, if the documents (Sec. 4, subsec. 2 of the General University Studies Act) prescribed for the chosen study programme are submitted. A restriction of admission can be effected only by the legislator and not by the administration.

It is, however, permissible to restrict the number of students for individual courses either for pedagogical reasons or for reasons inherent in the nature of the courses. Parallel courses shall be given in order to enable regular degree students to take the courses required in the academic study regulation within the stipulated number of semesters (sec. 10, subsec. 4 of the General University Studies Act).

Due to the introduction of certain admission restrictions (numerus clausus) in some countries, such as in the Federal Republic of Germany, Austria was forced to impose certain restrictions on the admission of foreign applicants to certain study programmes at Austrian universities.

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(1) General University Studies Act, sec. 7, subsec. 6-8

This measure affected in particular study programmes where restrictions abroad led to a sudden, enormous increase in the number of applicants in Austria.

In the following study programmes only a limited number of foreigners are admitted: architecture, biology, chemistry (including food chemistry and biochemistry), geography, medicine (including dentistry), physical education, mathematics, pharmacy, physics, psychology, law, veterinary medicine, economics, civil engineering and electrical engineering (as of summer semester 1974).

In Austria we have a twofold, or two-step access to the universities:
- the general access to the university, i.e., the admission to the university community by way of immatriculation;
- the admission to a certain study programme.

In Austria students are free to choose their study programmes and universities. The only conditions for admission are the fulfilment of the legal prerequisites as to prior education, such as secondary-school leaving certificate of supplementary examinations possibly required for the subjects of the chosen study programme (the actual grades obtained at secondary schools are not taken into consideration).

Any legal or administrative measures that would introduce a numerus clausus are rejected by the Federal Government and almost all other political powers.

2.2.2 Acquisition of the entitlement to university studies and transfer to the universities

Development in the number of secondary-school graduates

In the 1960's the number of secondary-school graduates varied between 10,200 (1964) and 13,000 (1966), with only a slight upward tendency. The beginning of this decade brought a sudden increase. Between 1960 and 1969 the number of secondary-school graduates rose by only 1,000. Between 1969 and 1972 the figure rose by 3,000 totalling 16,000. The available figures for 1974 point toward a similar increase to 19,000 within just 2 years. This development, the extent of which differed between the various types of schools, is mainly characterized by the rapid increases at the general secondary schools, in particular at the "Musisch-pädagogische Realgymnasien" (1)

From at least 1967 onwards, the number of secondary-school graduates has been dependent on factors other than the birth rate. From that time on an opposite tendency - falling birth rate and rising numbers of secondary-school graduates - has been observed.

One of the factors in this development is the growing interest of girls in higher education. Up to 1970 the number of female secondary-school graduates remained constant at around 39 percent of all secondary-school graduates. By 1971 that percentage had suddenly increased to 45 percent and - according to preliminary calculations - is expected to reach 46 percent in 1974. By 1985 the percentage of girls out of all secondary-school graduates is projected to rise to 49 percent (estimate of the Federal Ministry of Education and Art). One of the reasons for this considerable increase is the above-average number of girls at the "Neusprachliche Gymnasien" (2) and at "Musisch-pädagogische Realgymnasien", both of which were newly established by the School Organization Act of 1962.

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(1) General secondary schools that aim primarily at preparing students for attendance at the training colleges for primary-school teachers.

(2) General secondary schools with obligatory study of Latin and two modern languages.

At present, the increase in the number of graduates is lowest at the secondary vocational and technical schools. The expansion of these schools as well as public information campaigns may change the percentage in the next few years.

The numbers of graduates from the special forms of the general secondary schools are of minor importance, amounting to a mere 2.5 percent of all graduates.

Transfers from secondary schools to universities

The percentage of secondary-school graduates of one graduation class who start their studies at a university is called the transfer rate.

The available statistical data allow for a calculation of these rates of transfers to the universities from the winter semester 1967/68 onward.

The transfer rates depend on the number of transfers within the first three semesters following the secondary-school leaving examination. By the end of this period about 90 percent of all secondary-school graduates who intended to study at a university have begun their studies.

Table 1: Transfer rates of secondary-school graduates of the graduation classes 1967 to 1972 - Winter semesters 1967/68 to 1973/74

Maturanten d.Jahrganges				Von diesen inskribierten erstmals (in %)													innerhalb v. 3 Semestern		zusammen	
		N	in %	WS 67/68	SS 68	WS 68/69	SS 69	WS 69/70	SS 70	WS 70/71	SS 71	WS 71/72	SS 72	WS 72/73	SS 73	WS 73/74	N	in %	N	in %
1967	m	7223	100,0	20,3	3,1	33,1	0,6	1,8	0,2	0,8	0,1	0,7	0,3				4075	56,4	4405	61,0
	w	3935	100,0	34,7	1,4	3,6	0,4	1,1	0,2	1,2	0,3	0,9	0,3				1560	39,6	1723	43,8
	g	11158	100,0	25,4	2,5	22,7	0,5	1,6	0,2	1,0	0,2	0,8	0,3				5635	50,5	6128	54,9
1968	m	7838	100,0			20,1	3,3	30,8	0,8	2,0	0,6	0,8	0,3	0,8	0,2		4246	54,2	4687	59,8
	w	4661	100,0			33,2	1,9	2,2	0,4	2,3	1,3	0,8	0,5	1,0	0,6		1736	37,2	2056	44,1
	g	12499	100,0			25,0	2,8	20,1	0,7	2,1	0,9	0,8	0,4	0,9	0,4		5982	47,9	6743	53,9
1969	m	7786	100,0					18,6	3,1	32,5	1,1	1,7	0,2	0,8	0,2	0,4	4219	54,2	4567	58,7
	w	4938	100,0					35,0	1,6	2,5	0,6	1,8	0,6	1,4	1,0	0,7	1929	39,1	2229	45,1
	g	12724	100,0					25,0	2,5	20,8	0,9	1,7	0,4	1,0	0,5	0,6	6148	48,3	6796	53,4
1970	m	8968	100,0							28,6	4,7	24,9	0,7	1,6	0,6	0,7	5224	58,3	5547	61,9
	w	5494	100,0							34,2	3,5	3,3	0,7	3,5	1,5	1,2	2251	41,0	2625	47,8
	g	14462	100,0							30,8	4,2	16,7	0,7	2,3	0,9	0,9	7475	51,7	8172	56,5
1971	m	9234	100,0									31,8	5,6	18,2	0,9	1,4	5137	55,6	5351	57,9
	w	7495	100,0									32,5	1,3	2,9	0,8	2,3	2754	36,7	2986	39,8
	g	16729	100,0									32,1	3,7	11,3	0,8	1,8	7891	47,2	8337	49,8
1972	m	9063	100,0											37,7	5,6	15,8	5356	59,1	5356	59,1
	w	6840	100,0											40,4	2,0	2,7	3079	45,0	3079	45,0
	g	15903	100,0											38,9	4,0	10,1	8435	53,0	8435	53,0
1973	m	9565	100,0													37,2			3557	37,2
	w	7506	100,0													40,9			3073	40,9
	g	17071	100,0													38,8			6630	38,8

Tabelle 2: Übertrittsraten der Maturanten des Kalenderjahres 1972 Wintersemester 1972/73 bis Wintersemester 1973/74

Schulformen		Maturanten des Kalenderjahres (1) 1 9 7 2 N	in %	von diesen inskribierten erstmals im WS 1972/73 in %	SS 1973 in %	WS 1973/74 in %	zusammen N	in %
Allgemeinbildende höhere Schulen (Langform)	männl.	4.460	100,0	55,5	6,4	20,6	3.679	82,5
	weibl.	3.509	100,0	57,9	2,2	3,1	2.218	63,2
	gesamt	7.969	100,0	56,6	4,5	12,9	5.897	74,0
Musisch-pädagogisches Realgymnasium	männl.	1.186	100,0	29,3	4,0	12,6	544	45,9
	weibl.	1.943	100,0	26,2	1,2	1,6	566	29,1
	gesamt	3.129	100,0	27,4	2,3	5,8	1.110	35,5
Allgemeinbildende höhere Schulen	männl.	5.646	100,0	50,0	5,9	18,9	4.223	74,8
	weibl.	5.452	100,0	46,6	1,9	2,6	2.784	51,1
	gesamt	11.098	100,0	48,4	3,9	10,9	7.007	63,1
Berufsbildende höhere Schulen	männl.	3.120	100,0	15,3	4,4	10,4	937	30,0
	weibl.	1.327	100,0	14,2	2,1	2,9	254	19,1
	gesamt	4.447	100,0	14,9	3,7	8,1	1.191	26,8
Sonderformen der Allgemeinbildenden höheren Schulen	männl.	297	100,0	40,7	12,5	12,8	196	66,0
	weibl.	61	100,0	49,2	11,5	6,6	41	67,2
	gesamt	358	100,0	42,2	12,3	11,7	237	66,2
Insgesamt	männl.	9.063	100,0	37,7	5,6	15,8	5.356	59,1
	weibl.	6.840	100,0	40,4	2,0	2,7	3.079	45,0
	gesamt	15.903	100,0	38,9	4,0	10,1	8.435	53,0

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(1) In der Österreichischen Schulstatistik sind die Ergebnisse der Reifeprüfungen nicht einheitlich erfaßt, weshalb nach Angaben der Abteilung II/6 des Bundesministeriums für Unterricht und Kunst die Zahl der Schüler in den Absolventenklassen verwendet werden; der Fehler ist vernachlässigbar klein

Of the secondary-school graduates of 1967, 50 percent had transferred (56 percent of the male graduates, 40 percent of the female graduates) within the first three semesters, i.e., by the winter semester 1968/69 (1). The total number of male secondary-school graduates of that graduation class who started university studies is probably above 63 percent. The figure for female graduates is above 46 percent. The ratio of the following graduation classes is similar.

The development within the last four years (for the graduation class of 1973 only the first transfer rate is available) points toward a stagnation of the rate for men (about 58 percent within three semesters) and a slight further increase in the rate for women (about 45 percent).

Transfer rates are highest with the nine-year general secondary schools. About 67 percent of the secondary-school graduates of 1967 transferred to universities within three semesters following the secondary school leaving examination.
If the different types of schools and the effects of the School Organization Act of 1962 (new categories of general secondary schools at which a secondary-school leaving examination could be taken for the first time in 1971) are taken into consideration, the situation can be characterized as follows:
Transfers from "Humanistische Gymnasien" (2) are slightly decreasing, yet still show the relatively highest rates with male students at 83 percent and female students at 88 percent within three semesters. This is the only type of school from which more female than male pupils transfer to the university, although the number of graduates from this type of school has considerably decreased.

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(1) Transfers taking place in the following seven semesters under review average about 5 percent; later transfers seem not to exceed 3 percent of the respective graduation class.

(2) General secondary schools with continued study of Latin and a modern language, as well as Greek.

Compared with the graduation class of 1967 the total rate of transfers from "Realistische Gymnasien" (1) has remained stable at about 78 percent, but has risen from 52 percent to 69 percent in the case of girls.

More and more students having attended "Realschulen", - now called "Naturwissenschaftliches Realgymnasium (2) - and "Mathematisches Realgymnasium" (3) - change over to universities: 80 percent of the boys of the graduation class of 1972 did so, as compared to 64 percent of the graduation class of 1967; with the transfer rates for girls rising from 38 percent to 55 percent within the same period of time.
Considerably more female graduates from "Frauenoberschulen", (now called "Wirtschaftskundliche Realgymnasien" (4)) namely 48 percent, as compared to 28 percent in 1967, go on to university.

For the "Neusprachliches Gymnasium" (5),the only entirely new type of school under the School Organization Act of 1962, the transfer rates amount to 66 percent for girls and 81 percent for boys (within three semesters).

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(1) General secondary schools with plane and solid geometry, Latin and one modern language as compulsory subjects.

(2) General secondary schools with compulsory Latin and a choice between plane and solid geometry and supplementary instruction in natural sciences including biological and associated studies.

(3) General secondary schools with a second modern language and plane and solid geometry, but no Latin.

(4) General secondary schools specially intended for girls, stressing domestic science, with obligatory study of a modern language from the first year, a choice between a second modern language and Latin in the upper division and subjects of special concern to women.

(5) General secondary school with obligatory study of Latin and two modern languages.

The transfer rates of graduates from secondary vocational and technical schools are considerably lower than those of graduates from general secondary schools, although there is also an increase to be noticed with male students rising from 21 percent (class of 1967, within the first three semesters) to 32 percent (class of 1972, within the first three semesters) and with female students from 10 percent to 20 percent.

Educational demands and plans of secondary-school graduates

Every year an increasing number of secondary-school graduates are faced with the problem of whether to start post-secondary education or to seek employment.
Because of the structure of the Austrian educational system the decision in favour of or against post-secondary education is made at a much earlier stage, namely when pupils enter a general secondary school.
General secondary schools do not offer any vocational training; and therefore about 70 percent of all secondary-school graduates can hardly revise their decision, because a general secondary-school leaving certificate does not offer many vocational possibilities that would be acceptable for pupils oriented toward tertiary education. Therefore the percentage of secondary-school graduates, in particular graduates from general secondary schools who plan to transfer to or actually take up post-secondary education, is very high (see section 1).

According to the 1973 statistics on vocational guidance only very few secondary-school graduates plan to take up employment immediately. 62 percent of the 6,135 male secondary-school graduates and 33 percent of the 5,616 female secondary-school graduates planned to enter employment only after academic professional training; 37 percent of the female secondary-school graduates, but only 13 percent of the male secondary-school graduates intended to enter employment only after some other form of post-secondary education. 7 percent of the male and 6 percent of the female secondary-school graduates planned to enter employment without further training. The percentage of secondary technical and vocational school graduates who immediately after leaving secondary school wanted to start employment is far higher (43 percent men, 37 percent women) than that of general secondary school graduates.

Table 3: Vocational and educational plans of secondary-school graduates and students reported in Austria in 1973

male

Vocational and/or educational plans	Secondary-school graduates and students reported for vocational guidance							
	total		of these (column 2)					
			were advised		graduated in the year under review from			
					general secondary schools		secondary technical and vocational schools	
	number	in %	number	in %	number	in %	number	in %
1	2	3	4	5	6	7	8	9
a) Intention to enter employment without further training	407	6.6	381	7.2	157	3.2	123	42.7
b) Intention to enter employment after post-secondary training	780	12.7	641	12.1	660	13.5	22	7.6
c) Intention to enter employment after academic training and education	3,798	61.9	3,354	63.5	3,223	65.7	82	28.5
d) Multiple vocational and/or educational plans, combining a) to c)	524	8.6	496	9.4	403	8.2	36	12.5
e) Indefinite vocational plans	471	7.7	413	7.8	353	7.2	25	8.7
f) Unknown vocational plans	155	2.5	-	-	107	2.2	-	-
Total	6,135	100.0	5,285	100.0	4,903	100.0	288	100.0

female

Vocational and/or educational plans	Secondary-school graduates and students reported for vocational guidance							
	total		of these (column 2)					
			were advised		graduated in the year under review from			
					general secondary schools		secondary technical and vocational schools	
	number	in %	number	in %	number	in %	number	in %
1	2	3	4	5	6	7	8	9
a) Intention to enter employment without further training	354	6.3	261	5.8	229	4.9	82	36.5
b) Intention to enter employment after post-secondary training	2,096	37.3	1,635	36.1	1,833	37.4	73	32.4
c) Intention to enter employment after academic training and education	2,159	38.4	1,826	40.4	1,952	39.9	38	16.9
d) Multiple vocational and/or educational plans, combining a) to c)	436	7.8	418	9.2	403	8.2	9	4.0
e) Indefinite vocational plans	483	8.6	383	8.5	418	8.5	20	8.9
f) Unknown vocational plans	88	1.6	-	-	65	1.3	3	1.3
Total	5,616	100.0	4,523	100.0	4,900	100.0	225	100.0

Source: Federal Ministry of Soci[illegible] Administration, Annual statistics 1973 on the vocational guidance for secondary-school graduates, students, and university graduates.

The preference given to university education is undoubtedly a result of the structure of post-secondary education (see section 1: The position of institutions of higher learning in post-secondary education). Some investigations show that secondary-school graduates have highly differentiated ideas with regard to the length of post-secondary education and training. Upper Austrian secondary-school graduates questioned in the early 1970's showed that about one quarter of the secondary-school graduates would prefer higher education lasting up to 2 years and one quarter would prefer 3 to 4 years. There are great differences between general secondary school graduates and secondary technical and vocational school graduates.

Table 4: Intended length of studies in the post-secondary realm

Years	Secondary-school graduates		
	general secondary school	secondary vocational and technical school	total
0 to 2	22	28	23
3 to 4	23	33	26
5 and more	54	39	50
Total	100	100	100

Source: Wössner J., Nigsch O., Regionale Schulkultur, Linz 1973, p.84

A surprisingly high number of secondary-school graduates indicated a preference for short-cycle studies. More than three quarters of all secondary-school graduates were basically in favour of short studies; 70 percent would consider them suited for themselves, and 50 percent said they would decide upon such short studies.

A relatively high preference for short studies had also been observed earlier during a survey of secondary-school graduates in 1968. (1) Investigations into study motives and the objectives of university education showed that interest, talent, parental influences, and demands and expectations as to status are decisive factors in taking up studies. Idealistic motives (independence, expansion of intellectual horizon, interest in a study programme, etc.) and material interests are mentioned more frequently than realistic motives and pragmatic aims of studies (advancement, income, prestige, etc.) (2)

Vocational expectations are dominated by the idea of doing as little "alienated" work as possible. They, together with status expectations, are important motivating factors for taking up studies. This dominance of "idealistic" motives appears to be the result of the socialization process at the secondary school level (see also 2.3.1), which is more marked with female students than with male ones.

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(1) Bodzenta, E.: Effekte der Hochschulgründung Linz, Linz 1968, mimeographed (carried out for the then Federal Ministry of Education).

(2) See Strigl K., Studien und Beratungssituation der Erstinskribierenden der Hochschule Linz, Linz 1973; Kellermann P., Kärntner Maturanten 1973, Klagenfurt 1974; Petri S. und Seidl H., Untersuchungen zur Studien- und Berufswahl der Maturanten, Graz 1974.

These projects were carried out for the Federal Ministry of Science and Research.

2.2.3 Student figures

Beginners

In the winter semester 1973/74, 11,101 Austrian regular degree students started studies in their first semester. Of these 9,241 registered for the first time at a university, i.e., 5,465 men and 3,776 women.

Table 5: Beginners and students registering for the first time between 1955/56 and 1973/74 (Austrian regular degree students)

Winter semester	male		female		total	
	beginners	students registering for the first time	beginners	students registering for the first time	beginners	students registering for the first time
1955/56	2,247		740		2,987	
1956/57	2,245		861		3,106	
1957/58	3,160		1,312		4,472	
1958/59	3,905		1,788		5,693	
1959/60	4,652		1,899		6,551	
1960/61	5,185		1,900		7,085	
1961/62	5,193		2,110		7,303	
1962/63	5,128		2,137		7,265	
1963/64	4,894		1,902		6,796	
1964/65	4,798		1,751		6,549	
1965/66	4,697		1,974		6,671	
1966/67	4,619		2,224		6,843	
1967/68	4,975	4,117	1,971	1,724	6,946	5,841
1968/69	5,364	4,738	2,153	1,975	7,517	6,713
1969/70	5,450	4,317	2,346	2,000	7,796	6,317
1970/71	6,641	5,522	2,641	2,275	9,282	7,797
1971/72	6,760	5,618	3,364	2,919	10,124	8,537
1972/73	6,917	5,593	4,003	3,471	10,920	9,064
1973/74	6,689	5,465	4,412	3,776	11,101	9,241

Over the past decade the number of beginners has been steadily rising. The increase during the past four years has been entirely due to an increase in the number of female students. The number of male beginners has remained stable.

This situation is also reflected in the number of graduates from secondary-schools, where the number of female graduates is also increasing more quickly than that of male graduates. The transfer rates of male graduates remain stable; those of female graduates are rising.

The number of students registering for the first time in the winter semesters 1972/73 and 1973/74 as prognosticated in the University Report 1972 were in reality surpassed considerably.

The estimate concerning the number of female students was especially low; the main reason being that at the time of the estimate not enough data on transfer rates had been available in order to recognize long-term variations. Thus, only the first indications of a major increase in transfer rates concerning female general secondary-school graduates were noticeable. A similar problem exists at present, since it is impossible to say how long transfer rates will continue to rise and when they will come to a standstill. However, the annual rates of increase have been declining for some years.

Pre-university education of students

Most students, i.e., 88 percent of the girls and 77 percent of the boys, registering for the first time in the winter semester 1973/74 had passed their leaving examinations at one of the various categories of general secondary schools. Secondary vocational and technical schools accounted for only 9 percent and 17 percent, respectively, with most of the female students coming from commercial colleges, and the male students from secondary technical and trade establishments. The percentage of students who acquired their secondary-school leaving certificate in some other manner is almost negligible, namely 2 percent.

While the percentages of graduates from the various categories of secondary schools vary widely among male students, most girls graduate from the "Neusprachliche Gymnasien". Of the 2,400 students registering for the first time after having graduated from the above mentioned category of secondary schools nearly two thirds are women, i.e., about two-fifths of all female students registering for the first time. Another fifth transferred from "Musisch-pädagogische Realgymnasien". Only 28 percent of the boys had passed their secondary-school leaving examinations at one of those two types of secondary schools.

As the School Organization Act of 1962 entailed the discontinuation or institution of certain types of schools, no exact parallels to former years can be drawn. Yet, the structure of the student population has changed only slightly as concerns the types of schools at which the secondary-school leaving examinations had been acquired. Thus, the percentage of graduates from secondary vocational and technical schools has risen neither with female nor with male students; within the past five years it has remained stable at about 14 percent. There is hardly any difference between the Austrian student population as a whole and students registering for the first time as concerns their pre-university education.

Total number of students

In the winter semester 1973/74 a total of 66,850 regular degree students were registered at the universities; of these 58,613 were Austrian students, of these 18,309 (31 percent) were female students. These 58,613 students pursued 61,200 regular degree studies; thus, 2,600 students, i.e., 4 percent of all the students, pursued second studies simultaneously.

Table 6: Number of students: by student categories (winter semester 1973/74)

	Austrian students	foreigners	total
Regular degree students	58,613	8,237	66,850
Non-degree students	1,201	1,078	2,279
Auditing students	398	71	469
Total	60,212	9,386	69,598

The development of the number of Austrian regular degree students at universities can be devided into three phases:

The first phase, from the winter semester 1955/56 to the winter semester 1962/63, was a period of marked expansion. It was followed by a phase of relative stagnation until the winter semester 1968/69.

Table 7: Austrian regular degree students at universities (winter semester 1955/56 till winter semester 1973/7

Winter semester	male	female	total
1955/56	11,099	2,789	13,888
1956/57	11,095	3,008	14,103
1957/58	12,324	3,660	15,984
1958/59	14,237	4,841	19,078
1959/60	16,708	5,899	22,607
1960/61	20,405	6,832	27,237
1961/62	22,933	7,915	30,848
1962/63	25,201	8,783	33,984
1963/64	27,234	9,153	36,387
1964/65	28,093	9,273	37,366
1965/66	28,654	9,403	38,057
1966/67	28,240	9,659	37,899
1967/68	30,913	10,355	41,268
1968/69	29,453	9,924	39,377
1969/70	30,425	10,464	40,889
1970/71	32,154	10,968	43,122
1971/72	34,231	12,719	46,950
1972/73	37,645	15,513	53,158
1973/74	40,304	18,309	58,613

The phase of stagnation was followed by another period of expansion, beginning with the winter semester 1969/70.

The general increase in the student figures varied in the individual study programmes. Only three study programmes show growth rates that are also reflected in the percentage increase of the total number of students: social sciences and economics, medicine, and arts and sciences. In all the other study programmes the growth rates have been below average.

Fake registration

The increase in the overall number of students, however, is not only due to the rise in the number of students registering for the first time. That number has been increasing at a lower rate, especially within the past four years, than that of students who had already registered for one semester at least. This shows that, on the one hand, the duration of studies is increasing and that, on the other, relatively more students, who would not have done so a few years ago, continue to register for more than just the first term.

Table 8: Austrian regular degree students continuing to register (winter semester 1967/68 till winter semester 1973/74)

Winter semester	Students registering for the first time			Students continuing to register for two or more semesters		
	Number	Index	Index	Number	Index	Index
1967/68	5,841	100		35,427	100	
1968/69	6,713	115		32,664	92	
1969/70	6,317	108		34,572	98	
1970/71	7,797	133	100	36,382	103	100
1971/72	8,537	146	109	39,738	112	109
1972/73	9,064	155	116	46,005	130	126
1973/74	9,241	158	119	51,059	147	143

In assessing the number of students, a certain increasing tendency toward "fake registrations" is to be taken into account. Some investigations into study patterns show that between 10 and 30 percent of the students registered rarely or never attend courses at the university during the semester. (See section 2.5)

At the University of Vienna Faculty of Law and Political Science only ten percent of the registered students of law and political science attended their courses at the beginning of the summer semester 1974; toward the end of the semester attendance came down to five percent. The corresponding percentages for compulsory exercises are 42 percent and 34 percent, respectively; for other exercise-like courses they are 19 percent and 17 percent, respectively. (1)
While a generalization concerning students of law and political science is not possible, we clearly learn how problematic a figure the total number of students registered is.

It may be assumed that quite a few students register only in order to obtain the advantages offered to students. The abolition of university fees is likely to induce students to go on registering although they have practically discontinued their studies.

Under "fake registrations" statistics reveal a number of students (the exact number has not been established yet) who register as regular students with the intention to study or be professionally trained, but do not desire to finish the regular courses of studies.

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(1) Unpublished report; Federal Ministry of Science and Research, Vienna 1974; random samples of 59 courses

2.2.4 Proportion of individual population groups in tertiary education

Student rates and origins by regions

In the winter semester 1973/74 7.2 percent of the total Austrian resident population aged 18 to under 26 years studied at a university.

During the past few years the number of students has increased not only on a national level as a whole, but also in the individual Provinces (with the exception of Vienna), though to a varying extent.

Table 9: Student numbers by Federal Provinces
Austrian regular degree students 1970/71 - 1973/74

Federal Provinces	Proportion of students in the overall resident population aged 18 - under 26 (in %)		
	WS 1970/71	WS 1973/74	Changes
Burgenland	2.9	5.9	+ 3.0
Carinthia	4.7	8.0	+ 3.3
Lower Austria	3.6	5.6	+ 2.0
Upper Austria	4.6	6.5	+ 1.9
Salzburg	5.7	6.8	+ 1.1
Styria	5.0	6.7	+ 1.7
Tyrol	5.3	5.9	+ 0.6
Vorarlberg	4.1	4.7	+ 0.6
Vienna	11.5	11.1	- 0.4
Austria total	5.6	7.2	+ 1.6

Although the student rate shows a downward trend in Vienna, the probability that a Viennese youth will attend the university is twice as high as with young people of the same age in the Provinces. The lowest student rates are still to be found in Burgenland, Lower Austria, Tyrol and Vorarlberg, yet it is interesting to note that during the past few years it has been above all the student rate in Burgenland that has increased considerably, while the rate in Vorarlberg has remained more or less the same.

The Viennese students still account for about one third of all Austrian regular degree students; one third of the students come from Upper Austria and Styria. The smallest percentage, i.e., 2.8 percent, in the winter semester 1973/74 was reported from Vorarlberg, while in the preceding years it had been Burgenland that ranked at the bottom of the list.

Table 10: Origin of regular degree students: by Federal Provinces (in %)

	WS 1967/68	WS 1970/71	WS 1973/74
Burgenland	1.6	2.2	3.0
Carinthia	6.9	7.3	8.0
Lower Austria	11.7	12.5	13.7
Upper Austria	13.5	14.4	15.2
Salzburg	5.6	5.7	5.6
Styria	15.6	15.8	15.1
Tyrol	6.8	7.2	6.7
Vorarlberg	2.5	2.6	2.8
Vienna	35.8	32.3	29.9
Austria	100.0	100.0	100.0
	(N = 40,769)	(N = 43,014)	(N = 58,151)

The absolute figures obviously increased everywhere. Within a period of six years the composition of the Austrian regular student population with regard to regional distribution changed considerably. The numbers of students from Burgenland, Carinthia, Lower Austria and Upper Austria increased significantly. In all these Provinces there existed no fully developed university or no university at all in 1967/68. Vienna was the only Province that witnessed a marked decrease in the student percentage. The remaining Provinces maintained the status quo.

The probability as to whether or not a young person will go to a university will also be determined by the size of his home town. The bigger the home town, the greater the probability that the young person will take up university studies. About one-third of the entire Austrian resident population is living in the five big cities of Vienna, Graz, Linz, Salzburg, Innsbruck, and about 40 percent of the students come from these cities - all university cities, by the way.

A very low probability for young people to embark upon university studies exists in small communities up to 5,000 inhabitants.

Also, the increase in the number of students according to communities' sizes points toward an expansion of the regional recruitment.

While the percentage of the students coming from the big cities has decreased, more and more students have come from small communities during the past few years.

At present there are no data available that could clearly demonstrate the differences in student figures as to the various recruitment regions of Austria. A clarification of these regional differences would call for a series of investigations into socio-economic factors, such as

- social stratification in the region;
- industrialization of the region;
- degree of urbanization;
- regional structure;
- availability of educational institutions on the primary and secondary levels;
- regional proximity of a university;
- regional peculiarities as concerns the wage and income levels.

Social background (1)

The student population according to their social background is characterized by a marked under-representation of the lower social strata. Only 13 percent of the students come from workers' families, only 6 percent from farmers' families. Only 20 percent of the students have fathers who are employees or civil servants in the lower income brackets. The degree of under-representation of these groups becomes clearer if one takes into consideration that the share of fathers in the overall male population of the same age groups is highest with the workers (38 percent). The share of farmers in the overall male population aged 40 - 65 years is 12 percent.

More than 50 percent of the students are sons or daughters of civil servants and employees. Within the overall working male population aged 40 to under 65 years only 37 percent of the students' fathers are employees or civil servants. Within this group those students whose fathers belong to the medium and higher income brackets predominate.

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(1) For an analysis of the social background of the students at Austrian universities, the official student statistics provide two factors: the occupation or profession of the father and parental education. In both cases we are dealing with information provided by the students in the statistical questionnaires.

One aspect of the increase in the number of students was a continuous, though not spectacular rise in the share of students coming from population groups that have no close relation to education. Compared with the winter semester 1967/68, the share of regular degree students who come from farmers' families increased from three to six percent, the share of workers' sons or daughters from 10 to 13 percent. The number of students whose fathers are civil servants in the lower income brackets decreased slightly.

No significant changes are expected for the next few years. During the past few years the social composition of the group of students who registered for the first time did not differ markedly from that of the total student population. The high increase in the number of female students who registered for the first time during the past three years has not brought about any significant changes as to the social backgrounds of the female students; however, it has led to a general reduction of the differences in attendance figures for male and female students.
As concerns the groups of students whose fathers are self-employed or engaged in a profession, 45 percent are women. As concerns students from the under-represented population groups, the share of female students has never risen above 40 percent.

Table 12 : Father's education (Austrian regular degree students in the winter semester 1973/74)

Father's education	male	female in %	total (1)	education in the father generation of the students (2) (in %)
University	25	34	28	5
School with sec.-school leaving examination	20	22	21	7
School without secondary-school leaving exam.	55	44	51	88
Total	100	100	100	100

The change in the social composition of the student population, particularly as concerns students registering for the first time, is an indication of the trend toward an expansion of the social recruitment basis to include also sections of the population without higher education.

In the winter semester 1967/68, 32 percent of the Austrian regular degree students came from families with a higher education; by the winter semester 1973/74 this percentage had gradually decreased to 28 percent. At the same time the percentage of students whose fathers had no secondary-school leaving certificate had risen from 46 to 51 percent.

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(1) Percents calculated without "no data"

(2) Male resident population in the age groups 40 to under 65 years, population census 1971

Table 11: Father's occupation 1967/68 to 1973/74
(Austrian regular degree students)

Father's occupation	Winter semester 1967/68 in %	 1971/72 in %	 1973/74 in %
Self-employed persons or professionals	26	24	23
Farmers	3	5	6
Employees	29	29	30
Civil servants	31	29	26
Workers +)	10	12	13
Other occupations	1	1	2
Sum total ++)	100	100	100
	N=38,998	N=41,172	N=43,892

+) Including workers in the public service.
++) Percents calculated without "no data"

Education of parents

Most students still come from families with a higher level of education. 49 percent of the students have fathers with at least a secondary-school leaving certificate; 28 percent have fathers with a university degree. The under-representation of girls coming from less educated sections of the population is greater than that of boys.

The above average increase in the number of students coming from sections of the population where higher education is not considered a matter-of-course, in particular sons and daughters of workers and farmers, began with the expansion of the Austrian institutions of higher learning in the second half of the 1960's.

As concerns male students registering for the first time a downward tendency has appeared again. The share of students whose parents do not have a secondary-school leaving certificate is at present only 56 percent, while it had reached a climax with 59 percent in the winter semester 1969/70.

The rate of increase in the number of male students registering for the first time has been rather low in the past few years. This suggests that the rise in the total number of students registering for the first time has been mainly due to the recruitment of female students from sections of the population which are less openminded toward higher education and where the sons had already been studying at an earlier time.

University attendance by female students

Until a few years ago the figures concerning women beginning their studies or registering for the first time (1) did not - apart from annual fluctuations - show any significant differences from the general trend. This means that although women did partake in the expansion of student numbers, their share increased only slightly. The fact that for years the number of female entrants has always been higher than their share in the total student population can be explained by the higher rate of selection and the somewhat shorter duration of studies in the case of female students.

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(1) It is only since the winter semester 1967/68 that the students registering for the first time have been separately listed in the statistics. The number of beginners includes also those who change their study programmes, while the number of students registering for the first time includes only those who register at a university for the very first time.

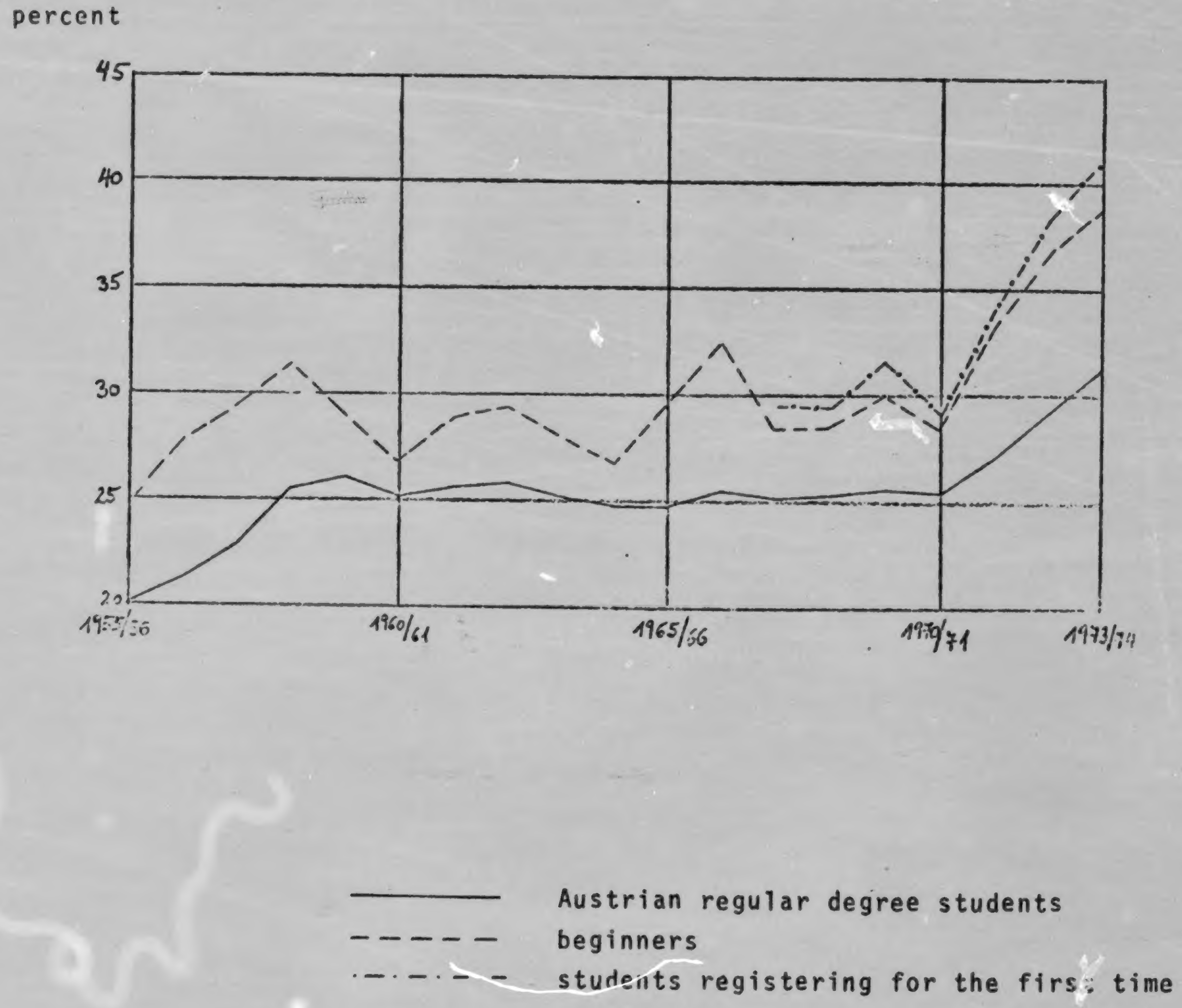
This development was interrupted in the winter semester 1970/71: While the number of male students registering for the first time has not risen during the past four years, the respective number of female students has shown a marked increase. The number of female students entering institutions of higher learning for the first time has risen by 66 percent during the past four years, while that of male students has stagnated.

This development is due to the considerably higher number of secondary-school graduates and the higher percentage of girls embarking upon tertiary education, raising the share of women from 30 to 41 percent.
In the winter semester 1973/74 a total of 58,613 Austrian regular degree students were registered at Austrian universities; of these 18,309 were women. 86 percent of all female students studied at the Universities of Vienna, Linz, Innsbruck and Salzburg; the remaining 14 percent at the other eight universities. More than 50 percent of all Austrian female students study at the University of Vienna. This seems to be the result of a preference of female students for certain study programmes or certain places of study; educational opportunities offered at the place of residence play an important role as well. In addition to the University of Vienna, it is above all the University of Graz that attracts a high number of female students. It has the second largest female student population in Austria - namely 17 percent of all Austrian female students. The recently founded School of Educational Sciences in Klagenfurt (secondary-school teacher training) has an above-average percentage of female students (45 percent).

Not even 4 percent of all female students study at the technical universities; of these three fourths study at the Vienna School of Technology.

Unless female students change their attitude toward the selection of study programmes and universities, the number and quality of the educational facilities at the universities, in particular those at the University of Vienna, will be of considerable importance for the study opportunities of female students in the future. The question of the effect of the above-average number of women at the universities is a very interesting one, yet it cannot be answered here.

Graph 1: Share of female students in the total student population, beginners and students registering for the first time since the winter semester 1955/56; Austrian regular degree students



Registration of persons working in paid employment

At present, about 8,300 persons working in paid employment are enrolled at the institutions of higher learning.(1) They account for 17 percent of the total student population. The number of persons working in paid employment who enroll at Austrian institutions of higher learning is steadily increasing; in 1970/71 only 5,000 persons working full-time were enrolled.

Table 13: Share of persons working in paid employment in the total student population

	Number	Share in the total student population (in %)
1970/71	5,163	14.6
1971/72	5,883	15.3
1972/73	7,029	15.9
1973/74	8,313	16.8

A large number of students, however, do not take up a job until they have begun their studies (see 2.6.: The social situation of students).

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(1) Persons working in paid employment are those who indicate in the statistical questionnaire that they work more than eight weeks during the semester. The values for 1973/74 correspond more or less to the findings of the investigation on the social situation of students, carried out under the auspices of the Federal Ministry of Science and Research; (IFES, Die soziale Lage der Studenten, Vienna 1974).

During the higher semesters there is a relatively larger percentage of persons working in paid employment. About 14 percent of the students had worked before they entered upon their studies. 8 percent of the students worked prior to their studies and did not give up their jobs during their studies. Thus, a certain percentage of persons working in paid employment prior to taking up their studies, give up their jobs upon entering the university. The group of students working in paid employment, particularly those who work full-time, are exposed to enormous stress, which often leads to considerable delays in studies (see 2.6)

There seem to be two reasons for the relatively high increase in the number of students working in paid employment:

- to an increasing degree a new group of secondary-school graduates enters the field of tertiary education;
- for financial reasons or as a consequence of unsatisfactory academic results a rising number of students are forced to take up a job.

The increase in the number of students working in paid employment is an indicator of the restructuring process that is taking place within the student population. The "normal student",who takes up his studies immediately after graduating from secondary school and who starts working only after the completion of his studies,is decreasing in importance.

2.2.5 Berufsreifeprüfung (1)

The "Berufsreifeprüfung" is a special way to tertiary education. On the one hand, it is the only way for persons who did not attend any secondary school to obtain the entitlement to study at institutions of higher learning; on the other, it is the only possibility for institutions of higher learning to determine the qualifications necessary for admission themselves.

The pertinent legal provision valid at present dates from the post-war period (Regulation of the Staatsamt für Volksaufklärung, für Unterricht und Erziehung und für Kultusangelegenheiten(2) of September 3, 1945, concerning the "Berufsreifeprüfung" for obtaining the entitlement to attend universities, (BGBl. Nr. 167/1945). The purpose of this examination is defined as follows: "By means of the "Berufsreifeprüfung" persons who have not been in a position to obtain a secondary-school leaving certificate or to take any other examinations entitling them to attend institutions of higher learning, but who, being of mature age and having proved their abilities in certain occupations of having been seriously engaged in certain specialized subjects, want to study said subjects at an institution of higher learning, shall be given an opportunity to prove that they are qualified and sufficiently prepared for these studies" (sec.1).

The "Berufsreifeprüfung" can be taken at any of the four Austrian Universities, i.e. Vienna, Graz, Inssbruck, Salzburg. Usually, people interested in taking the examination first contact the institution of higher learning at which they want to study.

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(1) This examination gives access to higher education without the necessary secondary-school leaving certificate (according to the General University Studies Act, BGBl. Nr. 167/1966, sec. 7, subsec. 4)

(2) State Office for Public Enlightenment, Teaching, Education, and Cultural Matters

In order to be admitted to the "Berufsreifeprüfung" the applicant has to submit an application to the Rector of the selected university, containing detailed information on the aim of his studies.

In addition to various documents "the opinion of a personality who is engaged in scientific work in the study field selected by the applicant and who has accurate knowledge of the work so far done by the applicant, as well as a certificate issued by the superior body competent for the applicant's occupation or a competent occupational organization" is to be attached to the application. (sec. 3 f).

Another admission prerequisite results from the age limit. The applicant must not be younger than 25 years, but should not be older than 45 years. Exceptions can be granted in special cases only.

As the universities have not offered any special preperatory facilities so far, candidates have been forced to prepare the examination material on their own or to make use of any of the few institutions outside the universities, such as preparatory courses at the teaching establishments for adults The "Berufsreifeprüfung" is to be taken before an examination board consisting of the Rector of the selected university, who acts as the chairman, and the examiners (university professors) for the individual subjects.

"The examination shall consist of a written and an oral part" (sec. 5 (2)). The examination material consists of selected subjects relating to a general education (a written essay on a general subject as well as on the history and geography of Austria) and the study field chosen by the candidate.

Candidates who have passed the examination receive a certificate which entitles them to pursue regular studies of the selected study programme at a certain institution of higher learning.

When changing the study programme or taking up an additional study programme, the applicant has to take a supplementary examination, unless the second study field has already been a subject of the "Berufsreifeprüfung".

Although a large group of people are offered an opportunity to attend institutions of higher learning by way of the "Berufsreifeprüfung", this opportunity is rarely utilized. A survey on the "Berufsreifeprüfungen" taken at the University of Vienna between the academic years of 1958/59 and 1973/74 has shown that no more than 254 applications were filed in a period of 16 years. The proportion of women has remained constant at 13 percent. The number of applications at the other three Universities is probably much smaller than at the University of Vienna.
During the past four years (since 1970/71), however, more people have been interested in this type of examination. 40 percent of all applications have been filed during this period.
Only 5 percent of all applicants were turned down; about 13 percent had not yet taken the examination when the survey was made. Between 1958 and 1974 only 145 out of 208 candidates admitted to the examination passed it. 63 of these 208 applicants, i.e., 32 percent, never took the examination, or failed. The success rate is thus 70 percent, with the percentage of male candidates being somewhat higher than that of female candidates.

The aspect of the "social background" of the applicants has been studied from two points of view:

1. according to the occupation of the applicant and
2. according to his father's occupation as a measure of the social class of the applicant's family.

Most of the applicants for admission to the "Berufsreifeprüfung", i.e. 83 percent, are employees. Although 30 percent of all applicants come from working class families, the proportion of workers in the total number of applicants amounts to no more than 8 percent. When asked for their father's occupation, 37 percent of the applicants answered that their fathers were self-employed or running enterprises of their own. This category consists almost exclusively of farmers and persons running small enterprises.

The success rate of workers is far above that of employees. Only 75 out of a total of 254 applicants, i.e. 30 percent, went in for doctoral studies at the Faculty of Arts and Science with most of them choosing a combination of subjects in the field of humanities.

Only few applicants decided in favour of technological study programmes. About one third of the applicants aimed at social and economic study programmes or study programmes that are regarded as the predecessors thereof (e.g., economics, political science). About 18 percent chose law and almost 10 percent decided to study at the Vienna School of Agriculture. The latter applicants had the highest rate of success, i.e. 75 percent.

During the last four years there has been a clear tendency toward the social and economic study programmes.

The average age of the applicants was 31 years at the time when applications were filed and 32 years when the "Berufsreifeprüfung" was taken. The average age of female students was even higher than that of male candidates. This means that students having taken the "Berufsreifeprüfung" can graduate from an institution of higher learning at the age of 36 - 38 at the earliest.

According to the Austrian Central Office of Statistics only 7 out of the 9,241 students registering for the first time at all Austrian universities in the winter semester of 1973/74 had taken the "Berufsreifeprüfung". This proportion, i.e. 0.08 percent, is extremely small and clearly indicates the low degree of efficiency of the "Berufsreifeprüfung".

It will be necessary to revise the regulation concerning the direct access to university studies so as to meet present-day requirements and effect an actual opening of the institutions of higher learning (see section 8).

A bill worked out by the Federal Ministry of Science and Research in agreement with the Federal Ministry of Education and Art envisages the trial introduction of preparatory courses for an examination giving access to institutions of higher learning in the academic years of 1974/75 to 1979/80

2.2.6 Postgraduate studies and adult education

Postgraduate studies

It is not easy to define a realm of post-tertiary education since, at present, it exists more or less only as a postulate. A preliminary definition would have to include all those educational programmes which are offered for post-secondary school graduates. Training and continued education in a firm or the opportunities for further education offered by various special interest groups, etc., do not fall under this heading.

As pointed out in the University Report 1969 (p. 199 ff) and also in the University Report 1972 (vol. I, p.95), the scope of postgraduate studies offered in Austria is still very small. This is true for the institutions of higher learning as well as for other post-secondary institutions. The General University Studies Act lists among the objectives of higher education "further education of university graduates in the light of scientific progress". For this purpose mainly "Hochschulkurse" and "Hochschullehrgänge" were established. Section 18 of the General University Studies Act differentiates among three types of university extension courses:

a) General "Hochschulkurse" and general "Hochschullehrgänge" shall impart primarily practical knowledge. The completion of regular degree studies or the simultaneous pursuance of regular degree studies shall not be required.

b) "Hochschulkurse" for further education and "Hochschullehrgänge" for further education shall provide supplementary training in certain study fields either in addition to or after regular degree studies.

c) The purpose of "Hochschulkurse" for advanced studies and "Hochschullehrgänge" for advanced studies shall be to enable young scientists to receive some further training, going beyond regular degree studies, through an intensification of training and a confrontation with the latest results in certain fields of science.

At present, the institutions of higher learning mainly offer programmes of the second type; they are almost exclusively attended by students of regular study programmes and are mainly language courses. At some institutions of higher learning, particularly at the Vienna School of Economics, some general programmes are offered, belonging to the post-secondary rather than to the post-tertiary sphere.

Programmes for advanced studies or for university graduates (postgraduate courses) are, for instance, the Course for International Studies (University of Vienna), the University Extension Course in Business and Administrative Management (Vienna School of Economics), as well as the Courses in Dental Surgery at the Faculty of Medicine. Non-university postgraduate studies for university graduates in the field of social sciences are offered by the Institute for Advanced Studies and Scientific Research ("Ford Institute"). Other postgraduate institutions are the Diplomatic Academy, Vienna, and the Pedagogical Institutes for teacher training.
Since reliable data on this sphere are very limited, we must confine the following part to attendance figures of individual programmes.

University graduates attending individual courses, "Hochschulkurse" or "Hochschullehrgänge" at an Austrian institution of higher learning must register as auditing students. Any detailed break-down into individual types of extension courses is not possible here. The attendance by university graduates of extension courses is, however, minimal. In 1973/74 a total of 208 university graduates attended such extension courses.

Table 14: Number of auditing students registers for "Hochschulkurse" and "Hochschullehrgänge" in the winter semester 1973/74

	auditing students total	of these attended extension courses	
University of Vienna	237	135	
International Studies	-		7
Postgraduate Course for Medical Doctors	-		46
Dentistry	-		59
University of Graz	41	25	
Dentistry	-		18
University of Innsbruck	35	23	
Dentistry	-		17
University of Salzburg	23	4	
Technical University of Vienna	3	2	
Technical University of Graz	-	-	
Leoben School of Mining and Metallurgy	1	1	
Vienna School of Agriculture	38	8	
Vienna School of Veterinary Medicine	-	-	
Vienna School of Economics	9	7	
Linz School of Economics and Social Sciences	9	3	
School of Educational Sciences in Klagenfurt	2	-	
Total	398	208	

Source: Austrian Central Office of Statistics

The Institute for Advanced Studies offers university graduates two-year courses in social sciences (economics, political science, sociology; starting with 1974/75 business administration will also be included.) Since 1966 there have been 155 graduate students in these 3 courses.

Table 15: Graduate students at the Institute for Advanced Studies since 1966

	male		female		total	
	number	in %	number	in %	number	in %
Economics	66	86	11	14	77	100
Political Science	31	79	8	21	39	100
Sociology	25	64	14	36	39	100
Total	122	79	33	21	155	100

Source: Figures provided by the Institute

Since the Diplomatic Academy, Vienna, opened 95 students have completed postgraduate studies there.

Students without secondary-school leaving certificate

Under section 9 of the General University Studies Act persons having reached the age of 18 may be admitted to selected courses as non-degree students. In the case of "Hochschulkurse" and "Hochschullehrgänge" the age limit may be lowered to 15 years of age.

Thus, persons without secondary-school leaving certificate are given an opportunity to study at institutions of higher learning, although not within the framework of regular degree studies (diploma or doctoral studies). The provisions concerning general "Hochschulkurse" and "Hochschullehrgänge" thus enable the institutions of higher learning to fulfill their purpose of teaching which goes beyond regular degree studies, i.e. the training of future graduates.

However, participation in individual courses by persons who are not regular degree students as well as participation in "Hochschulkurse" has been minimal. There is still a lack of suitable courses.

As opposed to the increasing number of regular degree students the number of non-degree students has, apart from annual fluctuations, remained more or less constant. In the winter semester 1973/74 there were about 1,200 non-degree students at Austrian institutions of higher learning; this number more or less corresponds to the average of the past 20 years (see Annex, Table 9). Only a few of these students attended "Hochschulkurse" or "Hochschullehrgänge". In the winter semester 1973/74 the figure was about 500 persons, i.e. more than 40 percent of all non-degree students and about 1 percent of all university students.

Except for the Vienna School of Economics, which offers several "Hochschulkurse" and "Hochschullehrgänge", non-degree students attend practically only language courses. 518 students attended such courses, 259 of them courses offered at the School of Economics. These figures prove that a suitable range of courses will increase the number of people interested. From a national point of view, we see that the intentions laid down in the General University Studies Act have not been realized to date.

Table 16: Austrian non-degree students attending "Hochschulkurse" and "Hochschullehrgänge" by institutions of higher learning in the winter semester 1973/74:

	special students total	of these attended "Hochschulkurse" and "Hochschullehrgänge"
University of Vienna	362	78
University of Graz	82	25
University of Innsbruck	116	27
University of Salzburg	218	85
Technical University of Vienna	5	1
Technical University of Graz	6	2
Leoben School of Mining and Metallurgy	20	9
Vienna School of Agriculture	28	8
Vienna School of Veterinary Medicine	6	2
Vienna School of Economics	291	259
Linz School of Economics and Social Sciences	54	12
Klagenfurt School of Educational Sciences	13	-
Total	1,201	508

Source: Austrian Central Office of Statistics. The data are based on information provided by the students. It is possible that extension courses as defined in section 18 of the General University Studies Act were confused with individual "courses" of the regular study programme.

2.3 CHOICE OF STUDY PROGRAMME

Every person who has acquired an Austrian secondary-school leaving certificate may register as a regular degree student in any study programme at any Austrian institution of higher learning. Depending on the type of secondary school and on the study programmes chosen, supplementary examinations may be required (see 2.2.1).

2.3.1 Distribution by individual study programmes

In the winter semester 1973/74 the largest percentage of students, i.e. 36 percent or more than 21,000 persons, were registered in the study programmes of the Faculties of arts and sciences, followed by medicine with 13 percent and business administration and law with 8 percent each of the total number of students. Thus, these programmes alone comprised nearly two thirds of all students, a total of 37,957; the remaining 50 study programmes were chosen by 20,656 students, which averages 413 persons per study programme or less than one percent of all students. The number of students varies from one (mining geology) to 1,800 (electrical engineering). Among the highly frequented study programmes are economics, commerce, pharmacy, translating/interpreting, architecture, civil engineering, and mechanical engineering, in which the number of students varies from 1,000 to 1,800.

Between 1955 and 1967 the number of Austrian regular degree students beginning their studies more than doubled. In the individual study programmes, however, the development was varied. The number of Austrian regular degree students beginning their studies remained nearly constant in theology; it increased by 50 percent in the study programmes of law and agriculture, more than doubled at the Faculties of medicine, and trebled at the Faculties of arts and sciences.

At the School of Mining and Metallurgy the number of students beginning their studies decreased by nearly 50 percent during the same period.

Table 1: Austrian regular degree students: by groups of study programmes; winter semester 1973/74

	number		in %
Theology	1,132		1.9
religious education combined with other subjects		198	0.3
Law	4,444		7.6
Political and Economical Sciences (1), Dkfm.	457		0.8
Economics and Social Sciences	8,941		15.2
Sociology		382	0.7
Economics		1,381	2.4
Business Administration		4,843	8.3
Commerce		1,424	2.4
Economic Education		689	1.2
Medicine	7,497		12.8
Arts and Sciences	21,173		36.1
Pharmacy	1,255		2.1
Translation/Interpreting	1,056		1.8
Technology	10,234		17.5
Architecture		1,698	2.9
Civil Engineering		1,273	2.2
Mechanical Engineering		1,213	2.1
Electrical Engineering		1,800	3.1
Secondary-School Teaching Qualification		368	0.6
Actuarial Mathematics		90	0.2
Technical Mathematics		706	1.2
Computation Methods		153	0.3
Informatics		498	0.9
Mining and Metallurgy	541		0.9
Agriculture	1,063		1.8
Agriculture in the narrower sense		336	0.6
Veterinary Medicine	596		1.0
Irregular	224		0.4
Total	58,613		100.0

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(1) Study programmes to be discontinued

In 1968 the study programme of theology reached its highest number of students registering for the first time (1). After a sharp decline in the following year the number has increased only slowly again. The percentage of theology students out of the total number of students registering for the first time was 2.2 percent in 1967 and dropped constantly to 1.8 in 1973.

By 1973 the number of law students registering for the first time had almost reached the figures of 1967. Their share in the total number of students registering for the first time has,however, declined significantly, reaching its lowest level in 1971, with only half of that of 1967.

The figure for students registering for the first time in economics and social sciences increased constantly from 1966, the year of the study programme's institution, to 1972. In 1973, however, a drastic decline was recorded.

Every year more and more students (in absolute and percentage numbers) choose one of the study programmes offered at the Faculties of Arts and Sciences when first enrolling at a university. The number of students registering for philosophy, political science, sociology, psychology and pedagogics, more than trebled between 1967 and 1970. In the following years the number declined rapidly, so that in 1973 it was only twice as high as in 1967. However, in certain subject groups the number of students registering for the first time increased continuously: the 1973 figures for the philological subjects were two and a half times higher than the corresponding figures for 1967; nearly three times as high for art history, more than twice as high for the behavioural sciences, mathematics and natural sciences, and more than three times as high in physical education.

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(1) The number of students registering for the first time has been recorded statistically only since the winter semester 1967/68.

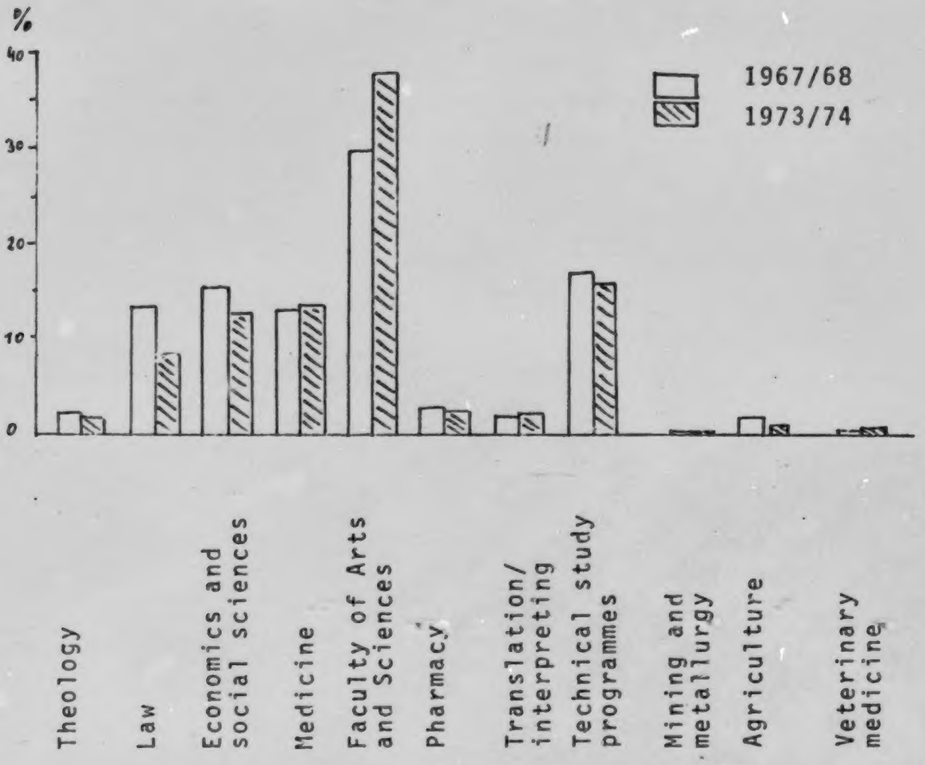
The number of students of history registering for the first time was declining continuously between 1968 and 1971. Only during the past two years have more first-semester students decided in favour of history. The percentage of students registering for the first time in medicine has remained relatively constant, averaging about 13 percent since the mid-sixties; the absolute figures have, however, constantly risen. A similar development is taking place in the study programmes of pharmacy as well as in translation/ interpreting.

In 1970 the number of students registering for the first time reached its highest level for technological study programmes, i.e. 18 percent. Since then this percentage has dropped to 16 percent. The absolute figures have, however, increased by 50 percent since 1967. Among the technological study programmes electrical engineering has recorded the highest and relatively most constant increase in the number of students registering for the first time.

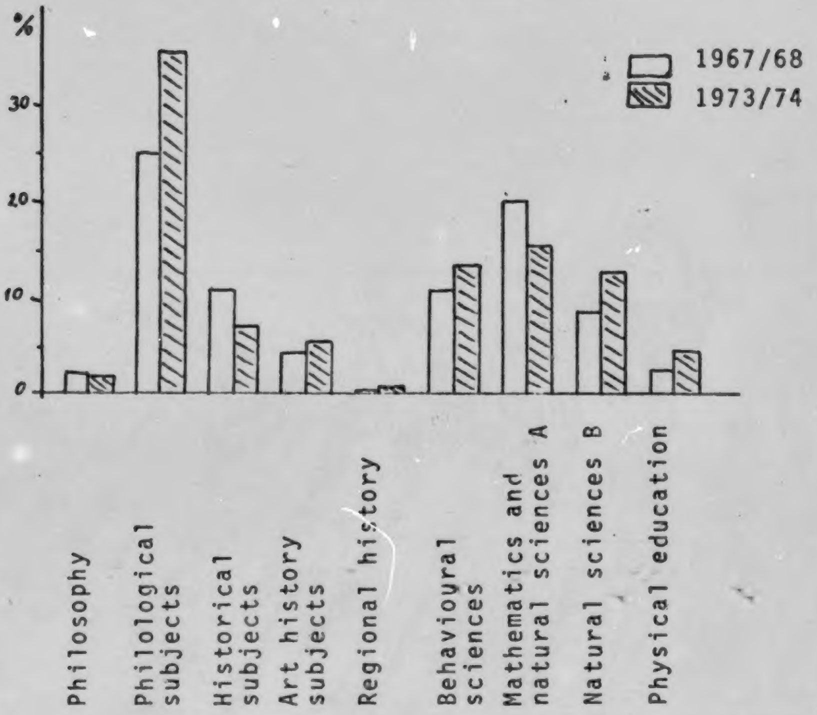
As concerns mining and metallurgy, nearly three times as many students registered for the first time in 1971 as in 1967, but only two thirds of that figure registered in 1973. On the average about one percent of students registering for the first time selected a study programme at the Leoben School of Mining and Metallurgy.

In the study programmes at the Vienna School of Agriculture the percentage of students registering for the first time decreased, whereas the total number increased. The percentage of students of veterinary medicine registering for the first time remained constant, at about one percent, while the total number doubled.

Graph 1: Percentage of Austrian regular degree students registering for the first time: per individual study programmes (in %)



Graph 2: Austrian regular degree students of individual subjects groups at the Faculties of Arts and Sciences as percentage of the total number of students at the Faculties of Arts and Sciences registering for the first time



In the winter semester 1973/74 there were 10,574 students registering for the first time (university beginners) and 12,649 first-semester students (beginners in a study-programme). The difference of 2,075 students results from the number of students who, by the beginning of the winter semester 1973/74 had transferred from one study programme to another or started a new study programme after having finished one. They account for about 16 percent of the first-semester students of 1973/74.

The frequency at which students transfer from one study programme to another is revealed in the individual flow statistics, established in 1967. Of all students registering for the first time in the winter semester 1967/68 more than one fifth transferred over a period of 11 semesters.

The number of students discontinuing one study programme in order to start a new one varies considerably among the individual subjects. The relatively lowest rate of transfer is found with arts and sciences and medicine, whereas with theology, economics or commerce more than one third of all students initially registering in these programmes have dropped out after seven semesters. The low rate of transfer among the students of arts and sciences must not be mistaken. There are more than 60 study areas in this group and changes within the group are quite frequent, although not recorded statistically.

Table 2: Transfers to different study programmes of students registering for the first time in the winter semester 1969/70 (1): the following numbers transferred from one study programme to another during the first 7 semesters

Abandoned study programme	Study programmes of second Choice										
	Arts & Sci.	Bus. Admin.	Translating Interpreting	Commercial educat.	Econ.	Law	Med	Informatics	Transferring students total	Students regist. first time	Students transferring as a percentage of those regist. first time
Theology	35	1				1			48	124	39
Law	52	13	12		7		8		112	565	18
Economics	7	22	3	1		6		2	45	124	36
Business-Admin.	13			25	15	1	2	1	74	647	11
Commerce	12	67	2	6	4		1	[illegible]	96	283	34
Medicine	20	5	4		2	8			41	669	[illegible]
Arts and Sciences		14	24		11	32	29	[illegible]	162	2,136	8
Pharmacy	12		2		1	4	6		28	214	13
Translat./Interpr.	13	3			2	1			24	122	20
Techn.Math.	2	2					1	19	27	117	23

(1) This table recording the first transfer from one study programme to another covers about 80 percent of the total number of Austrian regular degree students registering for the first time in the winter semester 1969/70 and subsequently abandoning their study programmes (only study programmes with a greater number of transfers are taken into consideration).

Most of transferring students chose as their second study programme either arts and sciences or economic sciences.

Within certain groups of study programmes there are favoured transfer fluxes, e.g., in the social and economic studies: Most transfers occur within one group of study programmes. This is also particularly true for certain technological studies. Business administration is an exception; many students who are science- or technology-oriented transfer into this programme.

All these considerations do not say anything about the reasons leading to the transfers. The high transfer rates show a relatively high degree of a student's uncertainty in choosing the right study programme at the beginning. But not all students who are dissatisfied with their study programmes transfer. In an opinion poll, organized by IFES, nearly one fourth of the students said that they would not choose their present subjects again if they started studies anew. In other words, this means that only three fourths of all students are satisfied with their choice. The high degree of uncertainty as to the choice of the study programme can be seen from the following figures: 9 percent of the students pursue parallel studies, another 13 percent are thinking of doing so.

If we classify the transferring students according to socio-economic criteria, we will see considerable class-dependent differences: for apart from transfers to another institution of higher learning, transfers to new study programmes are often regarded as indications of failure by people in the middle and lower classes; 19 percent of the sons and daughters of professionals - but only 4 percent of the sons and daughters from working families - transfer to a new study programme.

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(1) All data from: IFES, Die soziale Lage der Studierenden loc.cit.

Factors determinating the choice of study programme

The individual study programmes show a characteristic structuring according to the sexes. Pharmacy and translation/interpreting are most popular with women; particularly the latter one (percentage of women 84 percent). Sociology, religious education combined with other subjects, secondary-school teacher training for mathematics, descriptive geometry and chemistry, actuarial mathematics and computation methods are selected by 40 percent - 50 percent female students, i.e. 2,450 women. These eight subjects account for 14 percent of all women. Each of the study programmes traditionally preferred by women, namely pharmacy and translation/interpreting account for only 5 percent of the female student population, i.e. only 4 percent of all Austrian regular degree students.

Mention should also be made of the relatively high percentage of women studying architecture (18 percent) and information science (14 percent). The average percentage of women in technological study programmes is, however, only 8 percent.

In choosing their study programmes female students concentrate on relatively few study programmes, especially arts and sciences. More than half of all female students (56 percent) chose studies in these subject areas. Medicine, as well as social and economic studies (12 percent each) together with arts and sciences account for 78 percent of all female students; the corresponding figure for male students is 58 percent. The difference may be explained by the fact that one fourth of all male students chose a technological study programme, where there is only a small number of female students (only 4 percent of all female students).

Men are interested mainly in four study programmes; women in three. In addition, women prefer studies which give them a clear concept of their future profession (e.g., teaching professions) and short studies (translation/interpreting, actuarial mathematics, computation methods). They avoid studies with too high a degree of formal scientific requirements, although an increasing number of women seem to be taking up such studies that have been traditionally preferred by men. At the same time more women tend to embark upon studies of the arts and sciences.

Women were mainly interested in the subjects of the arts and sciences. The order of preference of study programmes is: arts and sciences, medicine, social and economic studies, law; for years it has remained the same. The predominance of women in the arts and sciences may be described in figures as follows: from 1955 to 1973 the percentage of women out of all Austrian regular degree students choosing a subject in the arts and sciences increased from 37 percent to 56 percent. In other words: one out of two female students studies an arts and sciences subject. In 1955 this figure was one out of three. As a result of this development the percentage of women in the arts and sciences increased from 40 percent to 48 percent, whereas the average percentage of women in all study programmes was only 31 percent.
At the Faculties of Arts and Sciences, pharmacy and translation/interpreting have held a special position for years. At the moment students of philological subjects account for 30 percent of the 21,000 arts and sciences students, and for 11 percent of all students.
Students of philology mostly aim for the general secondary-school teaching qualification, i.e. almost 4,700 out of 5,000. Altogether about 10,500 students of the arts and sciences indicate secondary-school teaching qualification as the aim of their studies, i.e. together with some 300 secondary-school teacher candicates at the School of Technology and students of religious and commercial

education (together approx. 1,000 students) some 12,000 students, or a little less than one fourth of all students, wish to become secondary-school teachers. (1)

The teaching profession is obviously not connected to any preferences by subject according to the sexes; no subject being dominated by either women or men. The order of preference - measured by the number of students in their first major subject - is the same for both sexes, namely: German, English, mathematics, history, physical education. For the second major subject it is: history, physics, geography, physical education, English, German. The most popular minor subjects are chemistry, philosophy, and psychology. Religious education, descriptive geometry and home economics are almost always chosen as a second major subject. The same seems to be true for chemistry as a minor subject.

The choice of the study programme depends considerably on the social background of the student, in the same way as access to higher education is determined by the social class of the student. Pupils whose fathers have no secondary or higher education seldom have a chance to begin university studies. Although, in the generation of the students' fathers 90 percent of the total population have no secondary or higher education, only 52 percent of the Austrian regular degree students registering for the first time in the winter semester 1973/74 came from this group, while 27 percent of the students came from families where the parents have a university education, although these families account for only about 4.5 percent of the total population. Tradition thus plays a greater role in higher education than in primary or secondary education. This tradition centers on two studies, namely law (37 percent of the fathers of law students have a university degree) and medicine (44 percent), which together account for nearly one fourth of all students registering for the first time. In some subjects, such as translation/

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(1) Source of data: Statistics for the winter semester 1972/73.

interpreting the proportion of students whose parents have an academic degree is even higher, but these groups do not weigh heavily in absolute figures. This educational tradition is of particular importance in the case of female students; in the four study programmes mentioned,one out of two students whose father has a higher education is female (in the total number only one out of three).

On the other hand,students with a lower educational background show a tendency toward theology, social and economic studies, arts and sciences and pharmacy; in this group the percentage of students from families with an academic background is very low, i.e., 20 percent, while the percentage of students whose fathers have no secondary or higher education is very high (60 percent), although these figures do not reflect the educational pattern of the total population.

With regard to their educational background (education of the father) students in technological study programmes follow exactly the average distribution pattern of the father's education within the total student population. According to the "father's education" the set of students may be divided into three sub-sets, namely the law/medicine-set (high level of father's education), the arts and sciences set (low level of father's education) and the technology-set (distribution as in the total student population).

The secondary education of the Austrian regular degree students prior to first registration for the various groups of study programmes is a clear indicator of the different schools supplying these study programmes with students. In all programmes graduates from general secondary schools dominate: most heavily in the study programme of medicine, where 95 percent of the male and 97 percent of the female students come from general secondary schools.

The situation is similar in theology, law, arts and sciences, and pharmacy.

This type of school is represented less in economics and social sciences, mining and metallurgy, and translation/interpreting. In the case of male students this also applies for the technological study programmes as well as for agriculture and veterinary medicine.

Graduates of secondary technical and vocational schools are most heavily represented in economics and social sciences; this is particularly true of graduates from commercial colleges. One quarter of all male and one fifth of all female students of translation/interpreting come from secondary technical and vocational schools (again most frequently from commercial colleges), but also from Secondary Schools for women's Domestic and Catering Occupations. 28 percent of all male students in technological study programmes and 29 percent of the students in mining and metallurgy come from secondary technical and vocational schools, particularly from secondary technical and commercial schools. At the Vienna School of Agriculture 25 percent of all male and 15 percent of all female students come from such types of schools - not only from technical and commercial schools but also from secondary schools of agriculture and forestry. Altogether, however, only 17 percent of all Austrian regular male students and only 9 percent of the female students in the winter semester 1973/74 came from secondary technical and vocational schools.

Graduates from special forms of general secondary schools (for people in employment, "Aufbaugymnasium", etc.) are represented to a very limited degree; the only exception is theology, with 11 percent of all male students coming from this type of schools. There are practically no graduates from the special forms of secondary technical and vocational schools at any of the institutions of higher learning.

In addition to the official statistics there is a number of research reports sponsored by the Federal Ministry of Science and Research (1), in which the factors determining the choice of study programmes are discussed. The results of the various investigations show that the choice of the study programmes - to the extent as it is made by the student himself - is mainly determined by the degree of interest in the contents of studies as well as by the self-assessment of the students aptitude for certain studies. (2)

The student's self-assessment of his aptitude for studies plays an important role in the selection of study programmes which are considered difficult by secondary-school graduates (mathematical-technological and natural-science subjects; medicine). It does not necessarily correspond to subject-specific test-intelligence.

In the case of study programmes which are considered to be easy, considerations of future career opportunities play an important role. The material interests of the students are concentrated on fields in which the pupils were successful in secondary school. (3) Investigations into the subjective purpose of university studies revealed a predominance of "idealistic" purposes as opposed to "realistic career considerations." (4) Such were the answers given in the interview; to what extent these were conventional answers (the "role of the university graduate") must still be determined.

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(1) a) Petri G.Seidl H.
Untersuchungen zur Motivation der Studien- und Berufswahl der Maturanten, Graz 1974
b) IFES, Die soziale Lage
c) Kellermann P., Kärntner Maturanten 1973, Klagenfurt 1974

(2) See Petri G., ... p. 128

(3) See Petri G., ... pp. 123

(4) Kellermann P., ... cited above

2.3.2 Academic counselling and vocational guidance

Three Federal Ministries are responsible for counselling and guidance in the realm of post-secondary education:

- Federal Ministry of Education and Art:
  All types of counselling activities directly related to schools
- Federal Ministry of Science and Research:
  Psychological counselling (psychological qualification tests) at the beginning of studies and psychological care for those who have academic difficulties
- Federal Ministry of Social Administration:
  Counselling and information concerning professional opportunities and prospects.

In post-secondary education four types of counselling services are offered in Austria:

1) vocational guidance and educational counselling on the secondary level
2) academic counselling at universities
3) student counselling at universities
4) private counselling initiatives.

At present, efforts are being made to coordinate these individual counselling activities.

Presently, independent student counselling services exist at the Universities of Vienna, Salzburg and Innsbruck as well as at the Linz School of Economics and Social Sciences. The establishment of a student counselling service at the University of Graz is envisaged for autumn 1974.

The services offered by student counsellors (psychologists) at those counselling centres comprise:

a) orientation and assistance in reaching decisions by means of diagnostic qualification tests (determination of the intelligence structure, analyses of interests, performance tests, tests on working behaviour, projective methods, etc.);

b) assistance in overcoming academic difficulties, particularly in those cases where students plan to change their study programmes or want to drop out. This help is given by means of individual counselling or through a group approach (e.g., training in controlled relaxation and concentration, learning techniques, behaviour modification, creativity-stimulating courses, psychotherapeutical treatment by a specialist, etc.);

c) According to section 2, subsec.1, lit. a, of the Student Union Law of June 12, 1950, BGBl. Nr. 174, the Austrian Student Union shall assist the student in his studies by means of academic counselling. In practice, Student Union's counselling activity (advice on registration, counselling with regard to individual study fields, and individual study planning) is supplemented by that of department heads, assistants, registration offices, etc.;

d) Vocational guidance falls within the competence of the Federal Ministry of Social Administration. The Ministry supplies information on the various occupations, qualifications, occupational opportunities and developmental tendencies on the academic labour market (demand, possibilities of specialization, opportunities for advancement, etc.). These different counselling activities have already been partially aligned and coordinated.

Counselling at secondary schools and compulsory schools

Educational counselling in primary and secondary education falls within the competence of the Federal Ministry of Education and Art.

Relevant information and advice shall help the pupil to make optimal use of the available possibilities in the educational system and to choose the schools suitable to his or her talent: personality and interests. The structure of the school system calls for special attention at entrance, transition and control points.

Section 3, subsec. 1 of the School Organization Act of 1962, in its fourth amendment, BGBl. Nr. 234/1971, stipulates among other things:

"The acquisition of higher education and the change from one type of school to another shall be made possible for all qualified pupils. Pupils and parents shall be informed of the tasks and prerequisites of the various school types and particularly, in the fourth and eigth classes as well as before the graduation from one type of school, they shall be advised on the further educational career to be recommended on the basis of the interests and achievements of the pupil".

At present, 66 school psychologists are engaged in educational counselling and are active at 36 educational counselling centres.

Preparation for the selection of a study field and educational career counselling at general secondary schools:

One of the first measures was to entrust certain general secondary school teachers with the educational career counselling and preparation of pupils for the selection of a study field.

In one-week introductory seminars one teacher from each school was provided with the pertinent information and was made acquainted with the psychological fundamentals of the counselling technique. One-day information seminars on a regional level and one-week follow-up seminars (existing since April 2, 1973) serve to introduce the pupil counsellors to further tasks in different fields of educational counselling. The tasks of the pupil counsellors at general secondary schools comprise:

- information for pupils and parents on educational careers (study and training possibilities at schools) and on the prerequisites for taking up and terminating such careers;
- counselling concerning and individual's educational possibilities in relation to the abilities and interests of the respective pupil;
- arrangement for help in cases of learning difficulties and behavioural disturbances;
- cooperation with other counselling centres;
- participation in the further development and improvement of the counselling system.

By cooperating with vocational counsellors, school psychologists and student counsellors, the pupil counsellor might be able to solve complex conflict situations.

Pupil counsellors are supplied continuously with information on changes in the education acts, ministerial and academic study regulations as well as innovations in secondary and post-secondary education.

At present, each secondary vocational school and all trade, technical and arts-and-crafts schools have their own educational counsellors.

The training of teachers as future educational counsellors at commercial schools and at secondary schools for women's domestic and catering occupations will be completed by the end of 1974.

224 consultants for pupil, parent and teacher information advise on the educational possibilities and aims of vocational schools. These consultants give lectures at general secondary schools, compulsory schools as well as parents associations, and provide individual information as well.

In the school year 1973/74 educational counselling began to be institutionalized at upper primary schools. In three basic semesters, 120 upper primary school teachers (for the time being one teacher per school district) were made acquainted with the tasks and methods of pupil counselling at upper primary schools.

The further training of such counsellors could be accomplished rather quickly provided the negotiations concerning the legal aspects (additional work of one hour per week) could be successfully terminated.

Educational career counselling at primary schools is under discussion.

The Federal Ministry of Education and Art publishes, together with the Federal Ministry of Science and Research, the series "Studieninformation" (Study Information), which all pupils of general and vocational schools receive. In addition, the respective departments of the Federal Ministry of Education and Art issue several publications on educational possibilities which are made available to interested pupils and parents.

Vocational guidance

The Federal Ministry of Social Administration is responsible for vocational guidance. For this purpose a vocational guidance service was set up for secondary-school graduates, university students and university graduates. The Provincial Labour Exchange Offices extend this service to all general secondary schools and in part - if the schools so desire - to secondary vocational and technical schools. The counselling activities take place during the last two classes and comprise information on occupations and professions. This information is given either collectively to entire school classes or (upon request) individually, along with psychological investigations in order to help determine what occupation the student is best suited for.

Private counselling initiatives

Hardly any data are available on such activities; information ranges from general brochures on institutions of higher learning, such as those published by the Zentralsparkasse der Gemeinde Wien, to specific information on specialized areas of instruction (information provided by industrial enterprises on technical study programmes). At present, however, these private initiatives do not constitute genuine counselling activities within the scope of educational planning

In a critical summary, the Austrian counselling situation can be judged as follows: On the one hand, the Austrian counselling system reflects the development in post-secondary education, on the other hand, however, it lacks in certain activities which should be part of such a system. Nevertheless, a number of measures have been introduced and have turned out to be quite successful:

- general training and educational information as well as use of mass media;

- coordination of counselling activities on various levels through a central governmental body;
- better information made available to those engaged in teaching and counselling;
- participation of opinion leaders (parents, teachers, colleagues) in [illegible]elling;
- post graduate counselling;
- creation of standardized material for all counselling activities;
- elaboration of scientific material (labour market analyses) for counselling.

2.4. COMPLETION OF STUDIES

2.4.1 Number and type of graduations

In 1972/73 4,402 Austrian students completed their studies (26 percent of whom were women). 44 percent of the students graduated with a doctorate, 56 percent with a diploma, etc. As compared to the academic year 1970/71 the number of diplomas increased slightly, while that of doctorates declined somewhat. This can be attributed mainly to the new ministerial study regulations concerning economics and social sciences which came into force in 1966. The figures show that women seldom acquire a doctorate degree, although more women than men graduate with a diploma, etc.

The highest number of graduations was recorded at the University of Vienna, followed by the Technical University of Vienna, the University of Graz and the Vienna School of Economics.

Since the winter semester 1955/56 the number of graduations has doubled; in the same period of time the number of female graduates has increased by more than two and a half.

Obviously, the study programmes which have the highest number of students also have the highest number of graduations (of all kinds), i.e., arts and sciences 28 percent, technical study programmes 18 percent, economics and social sciences 13 percent, medicine 12 percent. These four groups of study programmes account for almost three quarters (71 percent) of the graduates.

In the study programmes where students can graduate with a doctorate, a diploma or a magisterium, graduations with a diploma or a magisterium predominate, particularly with women.

Table 1: Graduations 1955/56 until 1972/73 (Austrian students)

Academic year	doctorate			diploma or other modes of graduation (1)			graduations total		
	m.	f.	total	m.	f.	total	m.	f.	total
1955/56	869	231	1100	(2)	(2)	1147	(2)	(2)	2247
1956/57	845	214	1059	854	209	1063	1699	423	2122
1957/58	829	194	1023	823	249	1072	1652	443	2095
1958/59	778	165	943	765	247	1012	1543	412	1955
1959/60	742	177	919	798	266	1064	1540	443	1980
1960/61	715	194	909	902	294	1196	1617	488	2105
1961/62	872	188	1060	923	419	1342	1795	607	2402
1962/63	977	228	1205	1018	465	1483	1995	693	2688
1963/64	1029	323	1352	1106	517	1623	2135	840	2975
1964/65	1226	357	1583	1279	557	1836	2505	914	3419
1965/66	1216	405	1621	1385	561	1946	2601	966	3567
1966/67	1338	438	1776	1419	489	2008	2757	1027	3784
1967/68	1506	430	1936	1546	547	2093	3052	977	4029
1968/69	1489	426	1915	1784	609	2393	3273	1035	4308
1969/70	1648	421	2069	1745	627	2372	3393	1048	4441
1970/71	1757	515	2272	1814	598	2412	3571	1113	4684
1971/72	1621	466	2087	1803	687	2490	3424	1153	4577
1972/73	1465	479	1944	1799	659	2458	3264	1138	4402

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(1) including supplementary examinations to the teaching certificate

(2) separation between men and women not possible

About 2,000 students graduated in the academic year 1972/73 with a doctorate degree, one quarter being women. The highest numbers of doctorates were in the following study programmes: arts and sciences 30 percent, medicine 27 percent and law 25 percent. In arts and sciences the highest number of doctorates, i.e., 24 percent were awarded in the mathematics-oriented subjects of the natural sciences, followed by history and behavioural sciences with 19 percent each, philology with 11 percent and the remaining subjects of natural sciences with 10 percent.

27 percent of the 2,500 students who graduated in the academic year 1972/73 with a diploma, etc. were women. The highest number of graduates was encountered in the technical study programmes, i.e., 28 percent; in arts and sciences (teaching certificate) 26 percent, and in economics and social sciences 22 percent. The majority of the approximately 1,800 male graduates acquired a diploma in the technical study programmes (Diplomingenieur); the majority of the approximately 700 female students graduated in arts and sciences (teaching certificate).

The 649 students who completed their university studies in the academic year 1972/73 with a teaching certificate usually had the following combinations of subjects
German philology - history; mathematics - physics;
German philology - English philology.

As concerns technical study programmes, most of the diplomas were awarded in architecture (20 percent), followed by electrical engineering and mechanical engineering with 17 percent and 18 percent respectively, and civil engineering with 13 percent. There were very few female graduates in these study programmes (34 in the academic year 1972/73).

One sixth of the graduates were 23 years or younger, about 50 percent 25 years old at the most. About three quarters of the graduates completed their studies by the age of 29. 8 percent of the students who graduated with a doctorate degree and 5 percent of those who graduated with a diploma were older than 33.

An extrapolation revealed that a total of about 60 percent of the male and 46 percent of the female study beginners completed their studies regardless of the time factor. If we compare the number of beginners and graduates, we see that during the past 15 years an average of 13 percent (men) and 11 percent (women) have completed their studies after five years; 33 percent (men) and 29 percent (women) within seven years. Only individualized flow statistics which were introduced in 1967 allow for an exact determination of the success rates. Thus, a long-term exact analysis is not possible at present (see 2.5).

The statistical evaluation of the past 10 years (academic years 1963/64 to 1972/73) shows that about 34,000 persons completed their studies (at least on the first level of graduation).

Most of the graduations took place in the technical study programmes, followed by the doctorates in arts and sciences, law andthe graduations in economics and social sciences. The number of graduates in the technical study programmes slightly declined between 1963/64 and 1972/73, while those in arts and sciences - doctorates in the study programmes of the natural sciences - stagnated. The number of graduates in law also declined, while the graduations in economics and social sciences showed a marked increase.

The overall number of graduations in arts and sciences increased considerably: the same holds true of medicine.

The total number of graduates in Austria rose from 101,447 in 1961 to 120,727 in 1971 (population census).

The share of university graduates in the entire Austrian population increased in this period from 1.4 percent to 1.6 percent; the share in the respective age groups of 25 or above increased from 2.3 percent to 2.6 percent (see section 5).

2.4.2 Occupational and professional expectations

In a survey on the social situation of students, carried out in the summer semester of 1973 on behalf of the Federal Ministry of Science and Research, the respondents were also asked a number of questions concerning their future professional expectations. (1)

One quarter of the students want to go into teaching and one quarter want to concentrate on the practical application of scientific knowledge (excluding administration and management). 13 percent intend to go into science, 19 percent want to work in the economy, most of them aiming at executive and management positions; 4 percent want to enter into the civil service. Another 4 percent of the respondents want to go into politics, journalism, etc., 6 percent want to take up an artistic career; 2 percent named various other activities. Only 2 percent of the students have not yet made any decision regarding their future activities and have no special ambitions.

Expectations regarding future occupational and professional activities vary greatly according to sex and according to the study programmes. The majority of female students (41 percent) intend to become teachers, whereas male students prefer other activities. The number of female students wanting to go into research or aiming at executive positions in the economy is relatively small. This is probably due to a realistic assessment of the professional opportunities for women and due to the small percentage of women in study programmes preparing for such positions.

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(1) For representative sampling and number of interviews: 1276, IFES, Zur Sozialen Lage der Studierenden, research report, Vienna 1974

Table 1: Desired future activities aimed at by the students of the Austrian institutions of higher learning

	male	female	together
	in %		
Teaching	18	41	25
Scientific activities	14	10	13
Executive and management positions in the economy and the administration	23	6	19
Non-executive position	32	28	30
Artistic activities	6	8	6
Other activities, no response	6	7	6
Total	100	100	100
	(n = 903)	(n = 373)	(n = 1276)

By selecting certain studies the students make fairly definite decisions regarding their future professional careers. In the opinion of the students theology and mainly the arts and sciences serve primarily as preparation for the teaching profession, whereas medicine and studies at the schools of technology prepare for the practical application of scientific knowledge; economics and social sciences as well as law pave the students' way into administration. The majority of students of natural sciences want to go into science.

Table 2: Study programme and choice of profession

	desired activity (1)						
Study programmes in groups	Teaching	Scientific activities	Executive positions in the economy	Executive positions in the administration	Medium positions in ther economy	Medium positions in the administration	practical application of scientific knowledge
Theology	58	-	-	-	-	-	-
Law	4	9	18	24	4	4	18
Economics and social sciences	14	1	60	5	11	1	4
Medicine	1	11	1	-	-	-	81
Arts and sciences (historical and philological subjects)	48	8	3	1	1	1	15
Arts and sciences (scientific subjects)	42	31	2	1	3	-	14
Architecture, civil engineering	4	4	22	4	5	1	35
Mechanical engineering electrical engineering	3	18	28	1	6	1	40
Natural sciences, formal sciences	16	24	24	4	5	1	20
Others	16	11	12	1	-	1	1

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(1) selected categories

When asked for their desired positions in the professional hierarchy, most of the students indicated that they wanted to be self-employed (30 percent) or to hold executive positions. Another 15 percent wanted to obtain medium positions in public administration, whereas only 6 percent aimed at corresponding positions in the economy. In assessing their opportunities, however, the students were more realistic

Table 3: Wishes and assessment of opportunities with regard to the position in the professional hierarchy

	wish in %	opportunity	difference
Economy, executive position	16	13	- 3
Economy, medium position	6	16	+ 10
Civil service, executive position	18	13	- 5
Civil service, medium position	15	30	+ 15
International organization	14	6	- 8
self-employed	30	20	- 10
no response	2	4	+ 2

Almost 50 percent of the students whose fathers are professionals want to achieve the same status; an above average percentage of them (36 percent) believe that their professional opportunities are good. Children of self-employed persons, employees, and higher civil servants prefer the professions, or want to go into the economy.

Students coming from families of civil servants in medium and low positions want to go into the civil service and believe to have adequate opportunities there. Relatively few students from working class and farmer's families want to be self-employed. They prefer aiming for positions in the economy and the administration where they foresee better opportunities. Usually they wish to obtain executive positions, but - on the basis of realistic estimations - they expect to obtain medium positions.

70 percent of all medical students want to be self-employed and 61 percent believe that the position of a general practitioner offers the best opportunities. Also the majority of the students of architecture and civil engineering (53 percent) want to be self-employed and indeed 40 percent see their best opportunities in such a position. The percentage of law students wanting to be self-employed is below average (20 percent). Only 13 percent believe that this status offers them the best opportunities while an above average percentage wants to go into the civil service.

Students whose fathers hold academic degrees expect to achieve a similar social position, whereas students from middle class families hope to obtain a slightly higher social standing. Only respondents from working class and farmer's families expect a marked rise in social status.

However, in spite of their high expectations students from the lower social classes do not value their own future status as university graduates as highly as the sons and daughters of university graduates do. This is probably due to the fact that students whose fathers hold academic degrees more often aim at executive positions or want to be self-employed.

An above average percentage of those students who want to go into research or hold top management positions in the economy expect to have a social status which far exceeds that of their families.

Expectations with regard to future income are far above the average actual income of the population. 57 percent of the male students, but only 26 percent of the female students expect to earn more than Sch. 10,000 (gross income) per month.

Table 5: Students' expectations with regard to income (gross income five years after completion of studies)

Austrian Schilling	male	female	total
	in %		
less than Sch. 6,000.--	3	8	4
Sch. 6,001.- - Sch. 8,000.-	14	33	20
Sch. 8,001.- - Sch. 10,000.-	26	33	30
Sch.10,001.- - Sch. 14,000.-	24	14	21
Sch.14,001.- - and more	33	12	25
Total	100	100	100

Expectations with regard to income depend on the kind of activity aimed at by the students. An above average percentage of those striving for executive positions, mainly in the economy, expect to earn more than Sch. 10,000.-; the same applies to those who want to be self-employed or intend to go into research. On the other hand, almost all students preparing for the teaching profession do not expect to earn more than Sch. 10,000.- (five years after the completion of their studies).

On the average, students coming from higher social classes expect much higher incomes than do students from the lower social classes; relatively high expectations with regard to income are encountered above all with sons and daughters whose fathers are in the professions or are self-employed. The reason may be that the students know how much university graduates earn and at the same time have strong ambitions to obtain well paid positions.

2.5 STUDY CONDITIONS AND STUDY PROCESS

2.5.1 Academic success, change of study programme, dropping out

Since the winter semester 1967/68 an individualized electronic data processing system has been used to investigate the study process of the students of every graduation year registering for the first time. The study flow of students registering for the first time in the winter semester 1967/68 has been observed for 12 years. The collected data in these statistics provide some very interesting information on the study flow and academic success of students. In addition, we have data from estimates and findings from individual investigations.

Retention rates

The retention rates, which indicate how many of the students of one graduation year entering upon studies continue to enrol in the following semesters, give a first general survey on the study flow.

The flow data indicate that already after two semesters 13 percent of the students ceased to enrol at an institution of higher learning. In the course of 11 semesters the retention rate for one graduation year dropped to 60 percent, whereby a clear difference is revealed between male (63 percent) and female (51 percent) students.

Table 1: Re-registration of students registering for the first time in the winter semester 1967/68 in a study programme until the summer semester 1973 (in percent)

	WS 67/68	SS 68	WS 68/69	SS 69	WS 69/70	SS 70	WS 70/71	SS 71	WS 71/72	SS 72	WS 72/73	SS 73
male N = 3,802	100	92	88	87	84	83	83	79	75	71	67	63
female N = 1,572	100	90	84	81	79	77	75	73	66	60	56	51
Total N = 5,374	100	91	87	85	83	81	80	77	72	68	64	60

After 11 semesters 37 percent of the male students and 31 percent of the female students were still enroled in the same study programme.

Transfer to other study programmes and other institutions of higher learning

Students transfer rather frequently to other study programmes. In the period under review, i.e., 11 semesters, 18 percent of the students registering for the first time in the winter semester 1967/68 changed their study programme once; 8 percent transferred to another institution of higher learning. 4 percent changed their study programmes more than once. It is assumed that in arts and sciences subjects are changed more frequently than study programmes. (1)

Table 2: Changes of study programmes of students registering for the first time in the winter semester 1967/68 until the summer semester 1973 (in percent)

	male	female	total
study programme at the same institution of higher learning	10	3	13
study programme and institution of higher learning	4	1	5
changing study programme twice or more than twice	3	1	4
only the institution of higher learning	2	1	3

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(1) So far no official statistics exist on those transfers. Evidence is provided by questionaires. See IFES, Die Soziale Lage der Studierenden, Research Report Vienna 1974 on behalf of the Federal Ministry of Science and Research.

The frequent transfer into other study programmes seems to be due to a considerable insecurity in the choice of the study programme; on the one hand, it could also be a consequence of a disappointment in the course of studies. The findings of the investigation show that already one-fifth of the students were considering giving up their studies. (1)

The rate of transfers varies considerably in the individual study programmes. Of the students registering for the first time in the winter semester 1967/68, above all those enrolled in the study programmes in economics and social sciences, newly organized in 1966/67, showed the highest transfer rate (with the exception of business administration); the highest percentage figures were reported from sociology (51 percent), social economy (47 percent), economics (43 percent) and commercial sciences (30 percent). It should be pointed out that the great similarity of the first sections of studies in these study programmes makes it possible for the student to change study programmes rather easily without losing a semester Indeed, the data reveal that students in economics and social sciences transfer mainly within these groups of study programme and usually in their first section of studies. Most of the students transfer into another study programme in the 2nd, 3rd or 4th semester.

Transfer rates are also fairly high in the study programme Catholic theology (32 percent) and in law (27 percent), as well as in some technical study programmes, such as industrial engineering, mechanical engineering (45 percent), technical physics (32 percent), mining (33 percent), petroleum production (31 percent).

As concerns arts and sciences (under the old rigorosa system) few students transferred (11 percent); yet as already mentioned, subjects within the Faculty of arts and sciences are changed rather frequently.

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(1) See IFES. loc.cit.

Students of medicine and agriculture exhibit the lowest transfer rates - only 4 and 9 percent, respectively, within a period of 11 semesters.

The study programmes that students prefer as their second choice are business administration, arts and sciences, law, economics and medicine; almost two-thirds of the students transfer into one of the above programmes.

As concerns transfer trends, some significant features can be noted: students in economics and social sciences change mainly within this group of study programmes. Law students mainly transfer into arts and sciences and into economics and social sciences.

Students of medicine who change their study programmes prefer to go into arts and sciences and law; students in arts and sciences prefer medicine, law, interpreting and translation as well as economics and social sciences.

Very few transfer into the technical study programmes offered at the Technical University of Vienna, the Leoben School of Mining and Metallurgy, and the Vienna School of Agriculture.

The data from the flow statistics and other findings indicate that the following factors are important for transfers:

- similarity of content with regard to the first study programme;
- second study programme can be studied at the same institution of higher learning as the first study programme
- often the academic study regulation for the second study programme can be fulfilled more easily than that for the first study programme. Furthermore, shorter studies seem to be preferred.

All this does not give any information on the actual reasons for a transfer into another study programme.

Dropping out

The flow statistics allow for an exact determination of the drop-out rates for students who registered for the first time in the winter semester 1967/68. After 8 semesters 21 percent of those students had either exmatriculated or had not registered for three consecutive semesters, and were thus exmatriculated ex lege. (1)

In the period under investigation 19 percent of the male student population dropped out; for female students the figure was even 28 percent. 9 percent of all Austrian regular degree students dropped out of their studies after the first two semesters. Again, the drop-out rate for female students was much higher with 13 percent, as compared with 9 percent for the male students.

Table 3: Drop-out rates for students registering for the first time in the winter semester 1967/68 (in %)

	male	female	total
after the WS 1967/68 (1st)	5	7	5
after the SS 1968 (2nd)	4	6	4
after the WS 1968/69 (3rd)	1	3	2
after the SS 1969 (4th)	2	3	2
after the WS 1969/70 (5th)	1	2	1
after the SS 1970 (6th)	2	2	2
after the WS 1970/71 (7th)	1	1	1
after the SS 1971 (8th)	3	4	3
Total	19 (N=3,802)	28 (N=1,572)	20 (N=5,347)

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(1) A drop-out is a student who does not register for three consecutive semesters: therefore the period under observation is not 11 semesters here, but only 8.

On the basis of the student figures from the winter semester 1955/56 to the summer semester 1970 an estimate of the retention and completion rates was made in the Federal Ministry of Science and Research by by simulating the study flows. According to this estimate 44 percent of the Austrian regular degree students do not complete their studies. Again, the rate for women is higher, i.e., 54 percent. Thus, we have a ratio of 78 drop-outs to 100 students who successfully complete their studies.

The drop-out rates vary considerably in the individual study programmes, which allows the assumption that study conditions and the organization of studies (possibly also professional prospects) play a significant role in the academic success; the only exception being those students who are potential drop-outs - e.g. those coming from lower social strata - who prefer certain study programmes.

Table 4: Drop-out rates of students registering for the first time in the winter semester 1967/68 after 8 semesters: by groups of study programmes (in %)

	male	female	total
Theology	15	29	15
Law	28	34	29
Economics and social sciences	19	32	21
Medicine	6	16	10
Arts and Sciences	18	27	22
Pharmacy	13	21	18
Translation/interpreting	43	42	42
Technology and mining and metallurgy	19	42	20
Agriculture	21	33	23
Veterinary medicine	12	14	12
Total	18	27	21

The high rates call for an urgent investigation into the causes for dropping out.

Toward the end of 1974 a research project on this topic was completed; the project was carried out on behalf of the Federal Ministry of Science and Research.

Two investigations from the 60's are available which deal with the academic success and the duration of studies in individual study programmes: a longitudinal investigation of students who want to complete their studies with a secondary-school teaching qualification, and an investigation of the duration of studies and the academic success of students of law and political science at the University of Vienna. (1)

The investigations of students who desire to obtain the teaching certificate revealed no differences in the drop-out figures as concerns men and women; differences, however, did exist according to university locations and subjects.

Findings concerning students of law and political science at the University of Vienna support the assumption that there exists a certain connection between sex, social background and educational continuity on the one hand, and academic success on the other hand.

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(1) I. Rieder, Studiendauer und Studienerfolg, Weinheim-Berlin, 1968.
Titscher-Wisgrill: Studiendauer, Studienerfolg und ihre Faktoren,
publication series of the then Federal Ministry of Education, Vienna 1966.

Recently, three investigations have been carried out on behalf of the Federal Ministry of Science and Research which deal among others with the causes for dropping out.(1)

Drop-outs usually listed three main reasons for dropping out:

- the studying conditions constituted too great a burden;
- disappointment about the subject matter offered in the course of their studies;
- extra-university burdens on the students.

Unfortunately, the findings of these investigations cannot be generalized, as the inquiries were based on a statistically insignificant number of students.

Strigl and Traunmüller established for the students at the Linz School of Economics and Social Sciences a connection between dropping out and students' engagement in studies until the time they dropped out. Students who exhibit very insignificant studying activities during the first semesters are "particularly in danger of becoming drop-outs". (2)

All available papers show that there are a number of socio-economic elements and certain factors inherent in the studies themselves that further the students' dropping out; yet there seems to be no clearly definable "dropping out complex".

Duration of studies

Very few students terminate their studies within the minimum duration of studies as stipulated by law. The graduates of the academic year 1972/73 exceeded the minimum duration of studies by more than 5 semesters on the average.

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(1) Wössner J., Zur Soziallage verheirateter Studierender, Linz 1973; Kökeis-Neunteufel, Studienreform Maschinenbau, Vienna 1974.

(2) Traunmüller R., Strigl K., Statistische Analyse der Studiendauer der Studierenden, Vienna 1974

The results of the flow statistics: Of the students registering for the first time in the winter semester 1967/68 only 2 percent concluded their studies within the legally stipulated minimum duration of studies. 44 percent of these graduates had enrolled in study programmes of economics and social sciences; these study programmes, however, accounted for only a small percentage of students registering for the first time in the winter semester 1967/68, namely some 16 percent.

Only 18 percent of the students registering for the first time in the winter semester 1967/68 needed a maximum of two additional semesters for completing their studies; again the proportionally highest percentage was reported from the study programmes in economics and social sciences.

A total of 29 percent of those who first enrolled in the winter semester 1967/68 completed their studies within 12 semesters, although in principle studies in all study programmes could have been completed within this period of time.

The other students were either still enrolled or had dropped out. Social and economic sciences again hold a special position, i.e., they have completion rates of up to 64 percent.

The average duration of studies is highest in the technical study programmes, and usually amounts to between 16 to 17 semesters. This means that the average student studies about twice as long as the stipulated minimum duration of studies. Also students of medicine and veterinary medicine study an average of 15 semesters; a similar situation exists with students enrolled in doctoral study programmes in arts and sciences.

So far as the minimum duration of studies has been least exceeded by students in the study programmes of economics and social sciences. On the average, the graduates of the years 1969/70 to 1971/72 did not even exceed the legally stipulated minimum duration of studies by two semesters. This allows for the conclusion that the organization of studies plays an important role in the duration of studies.

A reduction of the prescribed minimum duration of studies will thus be unsuccessful without a large-scale reorganization of studies.

With the exception of the students of economics and social sciences, almost all the other students that were included in these flow statistics still studied according to the old studies acts. It is expected that, similar to the social and economic sciences, a reduction in the actual duration of studies will be achieved after the new studies acts have become effective.

In retrospect, however, a tendency to prolong the studies is still noticeable. Yet, this tendency is by no means as dramatic as many people maintain. The graduates of the academic year 1967/68 exceeded the minimum duration of studies by 4.7 semesters on the average, while the average figure was 5.3 semesters for the graduates of the academic year 1972/73.

Table 5: Average prolongation of the stipulated minimum duration of studies (in semesters) and average age of the Austrian graduates for all the universities in Austria

	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73
Prolongation of studies in semesters	4.7	4.7	4.2	5.6	5.4	5.3
Age of graduates	25.7	25.9	26.1	26.2	26.4	26.2

The average age of university graduates increased from 25.7 years to more than 26 years. The prolongation of the duration of studies is not the same in all study programmes. It occurs mainly in some technical study programmes and with graduates in doctoral study programmes in the arts and sciences. In almost all other study programmes the average duration of studies has remained the same or has even been reduced. Only some of the mass study programmes exhibit this tendency toward a prolongation of studies

The Federal Ministry of Science and Research devotes special attention to the problems of the prolongation of the duration of studies. Under the General University Studies Act the prescribed minimum number of semesters which the student has to register for is at the same time the minimum duration of studies. The universities have to organize the studies in such a way as to enable the students to terminate them in the stipulated period of time. (Section 2 of the General University Studies Act)

Sponsored research is being used in order to rationally reveal the reasons for the delays in studies and for dropping-out. A project in which the Linz School of Economics and Social Sciences, the Technical University of Vienna, the Technical University of Graz, the University of Salzburg and the Vienna School of Economics are participating, is being carried out as part of the CERI-IMHE Programme. (1)

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(1) The final report will be submitted at the beginning of 1975

Table 6: Development of the average duration of studies (in semesters) of Austrian graduates from universities in Austria

Study programmes (studies completed with)	Stipulated minimum duration of studies	academic year					
		1967/68	1968/69	1969/70	1970/71	1971/72	1972/73
Law (Dr. jur.)	8	11.4	10.1	9.9	11.6	11.4	11.5
Political science (Dr. rer. pol.)	8	10.3	9.5	9.9	12.8	14.2	12.9
Medicine (Dr. med. univ.)	10	15.2	14.1	14.9	15.2	15.2	15.2
Veterinary medicine (Dr. med. vet.)	10	16.0	16.4	13.9	13.3	14.6	15.6
Arts and sciences (Dr. phil.)	8	12.5	13.6	13.6	15.0	15.2	15.1
Arts and sciences (secondary school teach.qual.)	8	13.3	12.9	10.8	13.7	13.4	13.8
Catholic theology (abs. theol.)	8	-	11.4	11.6	13.3	12.2	13.2
Pharmacy (Mr. pharm.)	6	11.9	12.8	13.1	13.7	12.7	12.9
Interpreting (Dipl.Dolm.)	7	10.4	10.6	9.3	10.9	9.9	9.8
Translation (Professional examination)	5	8.7	8.8	8.3	8.5	8.9	6.7

Economics and social sciences (1) (Mag. rer. soc. oec.)	8	-	-	(9.4)	10.0	9.8	10.3
Commercial sciences (Dkfm.) (2)	6	9.5	10.7	8.0	11.8	12.8	14.2
Architecture (Dipl.Ing.)	9	15.0	10.9	15.7	16.2	17.2	16.1
Civil engineering, industrial engineering, mechanical engineering, electrical engineering, marine engineering, process eng., technical chemistry, gas and fuel engineering (Dipl.Ing.)	9	15.8	15.9	16.0	16.7	16.7	15.6
Technical physics, technical mathematics (Dipl.Ing.)	8	14.2	14.9	13.8	13.8	13.9	14.2
Surveying (Dipl.Ing.)	7	13.2	14.1	15.1	15.6	15.8	15.2
Mining and metallurgy (Dipl.Ing.)	8	12.6	15.1	14.3	16.1	16.0	13.6
Forestry, fermentation and food technology (Dipl.Ing.)	9	12.5	12.6	12.6	13.7	14.0	
Agriculture (Dipl.Ing.)	9	10.3	10.1	11.3	12.0	12.8	14.3 (3)
Agricultural engineering (Dipl.Ing.)	10	14.5	13.8	14.7	15.0	14.7	

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(1) Including commercial sciences (to be discontinued)

(2) The study programme will be terminated.

(3) Agriculture total (Dipl.Ing.): break-down not possible.

As there is rather limited material available concerning university research, conclusions based on daily experiences and evaluations play an important role. There are very few theoretical data that could provide explanations or constitute a basis for the elaboration of appropriate measures. The non-scientific explanations are concentrated above all on two theses:

1. Insufficient studying activities of the student lead to failure. The lack of such activities is caused by laziness, conscious refusal to reach a certain level of performance, abuse of academic free time and the postponement of occupational activities as a motivation for studying. Such explanations are usually accompanied by statements concerning the general efficiency loss in society. Very often such explanations are also tied up with prejudice against students or anti-intellectual attitudes and rigid concepts of order. The solution that emerges out of these attitudes is the following: reduce the problem to a moral level and consequently impose a more rigid concept of order.

2. The intensity of the studying activities decreases as the social recruitment basis expands; this results in an efficiency loss at the mass universities, a lowering of the academic levels of achievement. A greater number of untalented persons study at institutions of higher learning. These ideas express the fear of a proletarianization of the university and are usually closely connected with an elitist attitude toward education. The solution: more rigid selection criteria.

It would be worth investigating to what extent such ideas reflect changes in the social structures and to what extent such changes become apparent in the educational system the inherent functions of which are reproduction and change.

In the light of the student movement and the greater political comitment of students such ideas command a much greater attention of the general public.

It is certainly possible to attempt an unbiased analysis of the above mentioned standpoints. Also the selection function of the educational system can be studied by scientific methods.

The methods that are used in these investigations and the types of requirements for academic success that are investigated are of decisive importance for the measures to be taken, unless the measures have already been decided upon and the research findings have nothing but a legitimizing function.

In technical literature we find a host of psychological and sociological variables that are considered to be relevant for the study process.

An optimal classification of the causative factors would be as follows:
1. Individual factors;
2. Interpersonal factors;
3. Structure variable.

It is important which of the factors are used as a basis for the investigation, as this choice will determine the findings and the recommendations based thereon.

Depending on the research approach the findings will indicate various possibilities of action which will differ in effect and in the extent to which they can be politically realized. Decisions on measures to be taken, even if they affect only a relatively small sector, are closely connected with decisions concerning major aspects of educational policy and social policy. Thus, the choice of variables to be investigated is of great importance.

Taking into consideration the present extent of the delays in studies and present drop-out rates, some of the starting points for research appear to be somewhat unsuitable. The question is whether the lack of academic success is to be regarded as an individual problem of the student, or whether it would be more advantageous to look into the problems of the institution and the social relations within this institution. Most likely this would mean that the interest would be concentrated not so much on individual factors, but rather on interpersonal and structural variables, and that only such individual factors should be taken into consideration which allow a relation to structural variables to be established.

The relation between individual factors and institutional conditions would possibly reveal that institutional factors will intensify or compensate individual dispositions toward academic failure. As concerns concrete measures to be adopted this would mean that reforms in the institutional realm could reduce or eliminate unfavourable individual dispositions.

Measures in the field of psychological counselling and treatment will most likely be effective only in a limited number of cases. Thus, it is questionable whether it is meaningful to adopt measures for small marginal groups of drop-outs. Such measures are appropriate only in those cases where the basic and quantitative problems have already been solved.

It has been mentioned only very briefly that some starting points for investigations are somewhat problematic from the point of view of planning as well as their political significance. This shows that investigations that individualize the lack of academic success, offer hardly any bases for efficient reforms.

The same applies to investigations that deal with variables of social structure, as this structure cannot be changed within the given political possibilities.

What would be most desirable are investigations that open up possibilities for actions within the university itself and its organization.

2.5.2. Study patterns and attitutdes toward studies

Time budget

50 percent of the Austrian regular degree students use up to 38 hours (1) a week for studying. One tenth of the students study for more than 55 hours a week. As regards the number of hours per week used for studying, there are marked differences between the individual study programmes. Students of medicine and veterinary medicine have the highest time requirements. 50 percent of the students of these study programmes require more than 43 hours a week for studying, one fifth of them even more than 55 hours a week. For students of the technological study programmes the weekly time requirements are almost as high. Students of law require the least time, 50 percent of them can do with less than 28 hours a week.

Time requirements vary during the course of the studies. In their first semesters students require a relatively great amount of time for studying, i.e. 40 hours a week. Students preparing for examinations or writing a dissertation need much more time than those who have been studying for a number of semesters but neither prepare any examination or final written work nor attend courses any more.

Most academic study regulations require examination-oriented studying. One may therefore assume that students use more time for studying before examinations - at the end or at the beginning of a semester - than during the remaining time. It is therefore particularly important for the academic success that about 50 percent of the students have 20 additional hours available for studying whenever this is necessary (2).

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(1) The figures on the time budget are taken from: IFES: Das soziale Anliegen der Studenten, 1972, research report, on behalf of the Federal Ministry of Science and Research, Annex of Tables, p.1.

(2) See Wössner, Zur Soziallage ... , p.55 ff.

Students working in paid employment have more economical studying patterns, though they are less successful and do not penetrate so deeply into the subject matter of their studies.

The students spend most of their studying time on preparing for examinations and the attendance of courses.

Table 7: Studying time per semester: by types of activities

	in %
Studying and preparing for examinations	40
Attendance of, and participation in, lectures and lecture-type courses	25
Participation in courses requiring a substantial amount of activity on the part of the student	14
Voluntary activities and research within the framework of the studies (except courses)	13
Voluntary activities and research outside the studies	10

Source: IFES, Soziale Lage, ibid.

Studying patterns

More than 50 percent of the students blieve (1) that they can achieve the greatest success in their studies by participating in courses and studying manuscripts and/or books. Generally, lectures as well as study groups are regarded as being rather unfavourable for successful studying.

Students having to bear additional burdens during their studies (students working in paid employment, married students) prefer more intensive studying (books, seminar-type courses), whereas students at the beginning of their studies usually prefer those media which meet the formal requirements but do not constitute the most intensive way of studying (e.g. lectures).

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(1) IFES, Soziale Lage ... , ibid.

The majority of the students prefer to study alone, i.e. 74 percent. 40 percent of the students join with a colleague for studying (as well), only 10 percent indicate that they find it easier to study in larger groups. (1)

An individual investigation revealed that a high proportion of the students try to pass examinations after a minimum of studying time. No more than one fifth of the students indicate that they had studied the entire examination material.

About 50 percent of the Austrian regular degree students attend courses regularly during the semester, one tenth attend no courses at all. In the opinion of the students, for about 50 percent of all students the reasons for not attending any courses are in no way related to their studies.2

Table 8: Frequency of attendance of courses

"How often did you attend courses during the last semester?"

in %

	regularly	frequently	rarely	never	
Students total	46	22	22	10	(N = 1,276)
Students working in full-time jobs	23	10	40	27	(N = 173)
Students working part-time	44	23	23	10	(N = 374)
Students not working	52	24	18	6	(N = 729)

Source: IFES, Soziale Lage ... , ibid.

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(1) See Kekeiss-Neunteufel, Studienreform Maschinenbau, ibid., p. 25

(2) IFES, Soziale Lage ... , ibid.

On the basis of the figures obtained in a number of surveys (1) the percentage of students attending courses can be established fairly accurately.
Lectures are attended less frequently than exercises and exercise-type courses. The results of investigations in various study programmes are fairly similar.
Whereas at the Faculty of Arts and Sciences the proportion of students attending courses, i.e. 80 percent (see Fischer, p.II/25) remains more or less the same throughout the semester and applies to all types of courses, the situation is quite different at the Faculty of Law: the number of students attending lectures decreases continuously throughout the semester, but the number of students attending exercise-type courses remains fairly stable.

Students obviously attend courses because they want to obtain certificates which prove the progress of their studies and/or make them eligible for scholarships. In the case of lectures, which are attended less frequently, three quarters of the students indicate that they attend these courses because they are interested in the subject matter. With exercises, however, which are attended most frequently and more intensively, students generally feel that such attendance is necessary for the progress of their studies (Fischer, II/28).
It is interesting to see to what extent students feel to have benefitted from the individual courses. No less than 40 percent of the students think that they can derive little benefit from the courses they have attended. Exercises get lower scores than lectures, which are, however, attended less frequently. Although it must be kept in mind that only

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(1) See: M. Fischer: Die Organisation des Lehrbetriebes an der Philosophischen Fakultät der Universität Wien, research report on behalf of the then Federal Ministry of Education, Vienna 1971, in particular II/p. 25 ff.
Köckeiss-Neunteufel: Studienreform Maschinenbau ..
Wössner: Zur Soziallage ...
Stichprobenerhebung über Teilnehmerzahlen in Lehrveranstaltungen an der Juridischen Fakultät der Universität Wien.

limited conclusions can be drawn from such data, they can nevertheless be regarded as indicators of very important problems.

2.5.3 University didactics

Definition and frame of reference

In recent years the scope and importance of innovations in the field of university didactics have increased considerably. These innovations are an essential component of the reforms at the universities. University didactics is to be understood as part of general science didactics. Didactics studies the results and the communication of scientific methods at institutions of higher learning. It comprises analysis, criticism, and the new formulation of objectives, contents and forms of the scientific process of teaching and studying. It includes a whole complex of questions which cut through the fields of the various disciplines of social science (1).

The whole range of problems can be displayed in a matrix according to the objects and the levels of innovation; the projects which have been completed or are still under way can thus be clearly localized and evaluated.

Graph 1:

Levels Objects	I The individual course	II Dept./field of specialization	III University	IV Higher education in gener.
A Functions and objectives of teaching				
B Set-up and administr. of the organizational frame of teaching				
C Roles and mutual relations of roles taken of those participating in teaching				
D Contents, methods, media, examination instruments, groupings on the basis of social and time aspects				

Within this frame of reference all results from innovations in the field of university didactics, initiated by various forces (individuals, institutions), can be illustrated.

There are two basic factors for the growing importance of didactics at institutions of higher learning:
(1) Contradictions between the reality of teaching and the pedagogic and political demands raised by those involved in the teaching and learning process.
(2) Contradictions between the traditional regulation of the institutions of higher learning and society's new demands on institutions of higher learning.

Contradictions (1) occur in every-day university teaching, i.e. in the actual relations between teachers and students. Crowded courses for example lead to the following consequences: due to their large number, the individual participants can not sufficiently utilize opportunities of learning offered in the courses; individual care accorded to students is insufficient; students do not sufficiently communicate among each other and fail to use the opportunities offered by such communication; teachers don't get enough feedback on how their instruction is received by the students. It is characteristic for the period covered by the present report that since the late sixties many of those who are involved in the teaching and studying processes at institutions of higher learning have recognized these phenomena of traditional university teaching to be major grievances. These grievances could not be effectively remedied by the construction of larger lecture-rooms or by an increase in the number of chairs or teacher. The one-way communication typical of traditional university teaching which calls for no response on the part of the students, is one of the major problems. The great number of initiatives taken to supplement or to replace mass lectures by smaller work groups, the critique of lectures and the analysis of detailed questionaires are attempts to overcome this one-way communication. Also the analyiss of the students' studying habits reflects bad experiences with the actual teaching and studying practice.

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(1) Parts of the following presentation have been taken from: Entwicklung der Hochschulpädagogik/Hochschuldidaktik in Österreich 1966-1972. Part 1: Horst Rumpf: Analysen und Kritik, unpublished manuscript, 1972 on behalf of the Federal Ministry of Science and Research.

Contraditions of the second type are experienced mainly in institutions where teaching and research - which is basically free - are coordinated, supported and accentuated in the interest of society. Such contradictions are also felt in a political community that supports these institutions. In view of the growing number of students and corresponding lack of space, and the rising financial requirements of the universities, delays in studies and the drop-out rate question the efficiency of traditional university instruction. The diagnosis touches upon certain structural characteristics. It deals not with the communication in one individual course, but with the lack of coordination and the lack of transparency of study programmes. The fact that studies, though nominally the same, may, at various universities, differ considerably as to contents and difficulty and the lack of coordination of study programmes at one and the same university call for reforms. The initiative resulting from this experience must lead to: (a) a precise formulation and coordination of what has to be studied and taught at certain stages in the course of studies and (b) the form in which the academic success is to be documented. The didactic dimension of this experience and the actions taken are related to teaching contents, teachin hours and examination patterns. The goal is the achievement of a certain degree of uniformity, coordination, and efficiency in the studies.

In other Western and Central European countries the discussion and the resolution of contradictions of type (1) have given rise to conflicts between those directly involved (mainly the students) and the state authorities in charge of the universities; such conflicts have actually not yet arisen in Austria. The Federal Ministry of Science and Research prepares the way for the university reform designed to render university education more intensive and effective. At the same time, however, it supports the endeavours of teachers and students to carry through reforms at the lower levels.

The Legal Bases

The General Universities Studies Act of 1966 marked the beginning of the study refom. In the explanations to section1l (Principles and Objectives) the situation at the universities is criticized and the necessity of didactic innovations is underlined. "Mass lectures and the necessary but cumbersome administrative system alienate teachers and students; their dialogue is about to be discontinued. There are not enough teachers at certain institutions of higher learning or in certain subjects. Due to the lack of scientific and administrative staff, contacts can no longer be maintained between students and teachers. Sometimes, e.g. in seminars, exercises and preparations for dissertations, teachers do not want to return to a two-way communication with the students. Even if the good will is there, they often do not have an opportunity to do so. Administration comes before teaching and education; the universities are in danger of becoming adminstered educational institutions."(1) After some additional points of criticism, the text continues as follows: "Lit. e (cooperation between teachers and students) is important for the formulation of the studies acts and the ministerial study regulations; it means that the teaching material is to be communicated through personal contacts between the teachers and the students. By selecting the pedagogically suitable courses the two-way communication the most essential element of academic education, must be guaranteed. Regardless of the merits of the 'lecture', the main emphasis will have to be placed on seminars, preparatory seminars, and exercises, which are to supplement the lectures. On account of their specific pedagogic objectives, the courses (see sec. 16) will have to be rearranged into a new, comprehensive teaching programme. This is necessary in order to bring communication of knowledge experiments, exercises, discussions, independent work, practical application, professional work, and creative activity into a proper relationship with each other. The passive intake of the teaching material is of littel value. The student should become familiar with research, study the problems of his field, and be led toward independent, scientific achievements.(1) As concerns the main aspects of studies (courses, examinations, etc.) the General University Studies Act provides the general frame for the activities at the institutions of higher learning, yet leaves ample space for innovation.

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(1) Felix Ermacora (publ.): Österreichisches Hochschulrecht - Vienna 1972, Volume 1, second edition, p. 167.

In the Federal Acts on Technical Study Programmes, on Study Programmes of Mining and Metallurgy, on Study Programmes of Agriculture, on Study Programmes in the Arts and Sciences, etc., the frame set forth in the General University Studies Act is adapted to the respective study programmes. "In the wake of this legislative initiative and the subsequent coordinating activities of the administration a process was set in motion in which the most essential contents of fields of studies had to be openly discussed and voted upon". (2) The Acts also emphasize to a certain degree the particular importance of didactic innovations for the fields of science concerned. The draft of the Federal Act on Studies of Law reads as follows:

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(1) Ibid., p. 167 ff.

(2) H. Rumpf, Analysen und Kritik, ibid., p. 14

"The success of a reform of the studies of law - probably more than that of any other study programme - depends on improvements in the field of didactics. It should be stated here explicitly that for a long time university professors at all Faculties of law in Austria have of their own accord initiated the most diverse developments in this area. Many professors of law, however, have not informed the public - maybe not even the competent Federal Ministry - of their highly valuable endeavours. They certainly are not obliged to do so. Thus, there is no doubt that in the field of didactics concerning the legal subjects, many experiments are being made, i.e. obsolete types of courses are being reformed. Nevertheless, the Federal Ministry of Science and Research feels obliged to provide some didactic stimuli, which are mainly based on the experience and practice of the institutions of higher learning themselves. Of course, due consideration had to be given to the principles of freedom of teaching and studying. They could be laid down in the explanations in a model academic study regulation or in the Studies Act itself." (1)

After the adoption of the Federal Acts on the individual study programmes, the Federal Ministry of Science and Research has to issue the ministerial study regulations for the individual study programmes. In a ministerial study regulation the examination subjects have to be weighted, i.e. it must stipulate the number of hours necessary for each examination subject that is specified in the studies act. This is done by legally determining the subject matter of a certain study programme, the number of hours and the sequence of two study sections. "Private projects of scientists can no longer be so easily included in the academic curriculum." (2) The ministerial study regulations which have been issued for most of the study programmes by now, provide for the general planning of the teaching contents. This general planning on a national level will be completed once the respective ministerial study regulations are issued and have attained force of law through publication. The next step will be a detailed planning of the contents within this general frame. This detailed planning is laid down in the "academic study regulation". The new studies acts and the new academic study regulations are also intended to provide some guidelines for the students at the beginning of their studies. This is of particular importance for the Faculty of Arts and Science, where regulations concerning courses and examinations to be taken have been rather vague so far. The academic study regulations,based on the new studies acts, do indeed provide students at the beginning of their studies with accurate information on the type and sequence of courses to be taken. Particularly in the second section of studies students should have as much freedom of choice as possible. This conflicts in no way with the desire for some regulation and accurate information on the conditions for the completion of the studies.

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(1) Federal Ministry of Science and Research (publ.): Draft of a Federal Act on Studies of Law, Vienna, 1974, p.12 ff

(2) Rumpf H., ibid., p. 11

The Study Commissions

The Federal Act on Technical Study Programmes of 1969 was the first Act to provide for the establishment of study commissions. Since that time a number of specific studies acts with similar provisions have been passed.Initially, these commissions were an experiment in the cooperation among students, representatives of the academic intermediate staff, and the professors. The success of the Federal Acts on Technical Study Programmes, on Study Programmes of Mining and Metallurgy, and on the Study Programmes of Agriculture will depend essentially on the work done in the study commissions. It is here that the general principles of the study reform as laid down in the General University Studies Act have to be realized in the important fields of technology, mining and metallury, agriculture and forestry. It is necessary to organize these studies in a modern and meaningful way and, above all, to determine the number of hours required for the individual courses,in order to comply with the stipulations of sec. 2, subsec. 1 of the General University

Studies Act, i.e. to guarantee that the students can actually complete their regular studies in ten semesters.

The government bill of the University Organization Act contains detailed provisions concerning establishment, tasks, and composition of these study commissions. It is one of their main concerns to carry out or support didactic innovations at the universities. This was already pointed out in the University Report of 1972: "After the issuance of the academic study regulations for the reorganized studies the study commissions will have to deal first and foremost with questions concerning the organization of courses and examinations as well as the causes for delays in studies and the elimination thereof. During the second round of the study reform attempts will be made to solve didactic problems regarding the organization of courses and examinations." At the same time, however, the didactic activities at the institutions of higher learning allow for the testing of various models for the participation of assistants and students in selecting their subject matter, formulating the objectives, revising and improving examination patterns, and establishing criteria for the evaluation of different methods.

Didactic projects

The first survey on the current and projected activities in the field of university didactics was given by the Federal Ministry of Science and Research in 1972 (see University Report 1972). A preliminary study covered only training colleges for primary school teachers, while the main study included all institutions of higher learning.

The questionaire was split up into three sections: (1) questions concerning the extent to which the respective didactic project had been realized; (2) questions concerning its form of organization and its contents; and

(3) questions concerning the objectives of the project and its effects as far as they had already been studies. The study dealt mainly with the activities of the university professors; students' initiatives were hardly mentioned. A total of 103 questionaires were returned: 56 positive responses, 34 negative responses and 13 that were irrelevant to the questions of university didactics. The main reason for studying didactic findings and applying didactically relevant methods in teaching and studying is the dissatisfaction with the traditional types of courses: the number of students are too high, the organizational preparation is insufficient, and the courses lack in efficiency in spite of the input of work. The following new methods have been tested at different departments and/or chairs as alternatives to the traditional types of lectures, exercises, and seminars:

(a) splitting up of lectures into smaller working groups headed by tutors (students of higher semsters);
(b) block seminars and exercises at the beginning or end of a semster;
(c) splitting up of seminars and exercises into working groups that elaborate reports which are presented and discussed at plenary meetings (more than 50 percent of all activities).

This represents an attempt to catch up with the international development in the organization of courses. At a number of departments teaching aids were developed and made available to the students, e.g. films, slides, mimeographed material, and models of programmed instruction which more or less replace the traditional transcripts of lectures. Furthermore, overhead projectors and video recorders are increasingly being used. Although language laboratories have been used successfully at several institutions of higher learning, they were not mentioned in the answers on the questionaire. One may therefore assume that they have already become an integral part of teaching and are no longer regarded as a a special didactic activity. In a few instances didactic study groups were formed and didactic lectures dealt with scientific methods for improving instruction. The main topics of such lectures were the development of the curriculum and the planning of courses.

Activities and projects designed to develop more objective methods of measuring the students' performances are rarely mentioned. Some departments are testing new methods: requirement catalogues that can be readily tested should enable the students to reach their goals of learning in a more rational manner. Higher rates of success have already been noted in individual cases. (1) It has been generally recognized that didactics deserve greater attention. Thus, it is not surprising that spontaneous reforms of individual aspects of the study process that were initiated by certain individuals and chairs and often remained unknown to the public, have been replaced by a general didactic renewal on a scientific basis. The survey of the Federal Ministry of Science and Research seems to have particular significance for didactic information; it is indispensable that such information is directed to the relevant stages in the studying process (departments, courses). Many groups that have shown no or only very little interest in university didactics would feel motivated to do independent didactic work, if they were sufficiently informed of the positive results of such experiments to date. One should not underestimate the initiatives of individuals who can make important contributions to the solutions of these problems, if they are supported by project groups or the like. The Austrian Conference of University Rectors has a permanent committee on questions of university didacitics. This committee is in charge of the coordination and implementation of didactic project. In 1972 the Conference of University

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(1) see: University Report 1972, Volume I, p. 172 ff

Rectors organized a symposium entitled "Teaching at Institutions of Higher Learning". This symposium which attracted a large number of participants worked out a survey on the most important questions of university didactics. Another symposium will be held at the end of 1974 and will deal with two groups of problems: "Introduction into the Studies at an Institution of Higher Learning" and "Examinations."

The Klagenfurt School of Educational Sciences is the first Austrian institution of higher learning at which didactic considerations have influenced the structure of chairs.

At a number of institutions of higher learning commissions on university didactics have been set up. It is to be expected that other project groups, commissions, etc., will be established in the near future. If we take the activities carried on so far by the various groups involved in tertiary education and by the state authorities, and if we place them in the above mentioned frame of reference (Graph 1), we see quite clearly that section D predominates. With regard to the levels we see two of particular importance:

(1) The administration of science. Here the legislator established certain guide lines for the ministerial study regulations (deadlines, coordination, initial drafts, consultations, hearings).

(2) The individual courses. At this level organizational experiments involving social as well as time factors were made - introduction of working groups, team-teaching (teaching staff), introduction of block courses.

Activities on the other levels, i.e. universities, Faculties, and fields of specialization have had much less impact. According to the legal mandate, the departments and/or specialized groups and study commissions have to draw up academic study regulations. In a few instances the study commissions were also actively involved in initiating and commissioning empirical research projects.

This disequilibrium within the frame of reference clearly reflects a phase in the development of university didactics that is governed by peculiarities of the personnel situation and certain urgent academic questions. All those involved, in particular the state authorities, will have to make efforts to eliminate this disequilibrium and gradually replace it by comprehensive and well-balanced planning and promotion.

The Federal Ministry of Science and Research receives important stimuli from the international development in this field (1) and promotes numerous projects in university didactics. At present support is granted mainly to projects initiated by groups and individuals that are interested in this problem. Gradually this practice well be replaced, however, by the concerted promotion of priority projects. A list of priorities is being drawn up at present in order to gurantee that the most important problems are dealt with; nevertheless, individual initiatives will continue to be supported.

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(1) e.g. M. Daxner and L. Kuhn, Das Projekt Hochschuldidaktik, mimeographed, Federal Ministry of Science and Research, Vienna 1972;
F. Pallanch, Prüfungen an den Hochschulen - Analyse und Kritik, mimeographed, Federal Ministry of Science and Research, Vienna 1974.

2.5.4 Student counselling

Tasks and functions (1)

A lack of intellectual qualifications is very seldom the reason for students being unable to successfully terminate their studies. The difficulties are caused by other factors, such as:

- lack of information;
- wrong choice of studies;
- motivation conflicts;
- ineffective studying and working techniques;
- personal problems.

The realization that most of the causes of academic difficulties can be eliminated has led to the establishment of counselling centres at institutions of higher learning in various countries.

Student counselling at the Austrian institutions of higher learning is carried out as a scientific development project with a constant control of the efficiency of the counselling activities. The varied problems raised during counselling require a constant review of the methods employed. Since the relevant scientific bases have not yet been sufficiently clarified, student counselling is best carried out as "action research", i.e.,practical counselling is combined with development and research.

Establishment of counselling centres

In Austria student counselling was started in the summer semester 1969. At first, a counselling centre was established at the Faculty of Law and Political Science in Graz. Two psychologists, who were given half-day release worked as counsellors: a psychologist from the school psychology service of the Ministry and an expert psychologist for vocational guidance. At the same time, counselling activities were taken up at the Linz School of Economics and Social Sciences. A psychologist for vocational guidance was available on a half-day basis.

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(1) See also 2.3.2 "Academic counselling and vocational guidance"

At the beginning of the academic year 1969/70 the Austrian Student Union opened a counselling centre at the University of Salzburg. That centre at first cooperated with the counselling service of the Federal Ministry of Education, and was taken over by that Ministry the following summer semester. In the summer semester 1970, the counselling centre at the Linz School, which had been staffed by the labour exchange office up to that time, was taken over by the then Federal Ministry of Education. At the University of Vienna student counselling was started in the winter semester 1970/71. The Vienna counselling centre was set up by the Federal Ministry of Science and Research, which has been responsible for the entire counselling services since the Federal Ministry of Education was divided into two ministries.

A further student counselling centre was established at the University of Innsbruck at the beginning of the winter semester 1972/73. Since the summer semester 1974 the Vienna School of Music and Dramatic Art has had a counselling centre. Between 1971 and 1973 counselling services were offered to approximately 11,000 students.

As was to be expected on the basis of the students' figures, most of the counselling activities were carried out at the University of Vienna. Since the establishment of the counselling centres, the counselling activities have expanded considerably.

Most of the students who turned to these centres for advice did so several times. As the problems are usually highly complex and difficult, the students will benefit most if the counselling activities extend over a longer period of time.

The interest in acquiring information on studies is particularly great before the beginning of studies and at the time of registration.

Beginners have general questions concerning the studies, the study process, or the content of the different study programmes.

Student counselling establishes the contacts between the students and the tertiary institutions, a task that is of particular importance at large-scale universities.

It should be of primary concern to counsel students whose inefficient study methods impair their academic success. Many of these academic difficulties are caused by the students' personal situations, such as

- difficulties in establishing interpersonal relationships,which lead to insufficient social integration and constitute a special burden;
- inadequate living conditions (dormitories, crowded flats);
- personality-caused adjustment difficulties, which may lead even to suicide;
- sexual problems;
- conflicts with the students' parents and superiors.

It has been observed that very often highly qualified and particularly talented students suffer from mental crises. In most cases students do not drop out because of a lack in qualification but because of non-intellectual or external factors. Student counselling may thus help especially those students who are impaired in the development of their abilities and in the realization of their personalities.

Counselling activities further concern: choice of studies in the case of handicapped persons, overwork in the case of students who have a job besides their studies, or mental stress on foreign students.

The legal position of the student counsellors was regulated by the 1974 amendment to the Salary Transition Act, BGBl. Nr. 180. The present student counselling centres at the university towns of Vienna, Linz, Salzburg and Innsbruck were established on the basis of regulations issued by the Federal Ministry of Science and Research. A definite solution is envisaged in sec. 94, subsec. 1 of the government bill to the University Organization Act.

2.6 PROMOTION OF STUDIES AND SOCIAL EXPENDITURE FOR STUDENTS

There are a number of social benefits for students, especially those from lower income brackets, which help a large number of young people to finance their studies.

2.6.1 Total expenditure

In addition to direct financial support through grants there are a number of special benefits: dining halls, dormitories, health insurance, contributions to fares. Especially with regard to dining halls, dormitories and scholarships the Federal Government does not supply all the funds. A number of social and political institutions demonstrate their interest in university studies by providing some kind of assistance, such as scholarships granted by the Federal Chambers, local authorities, Federal provinces, or the Austrian Trade Union Association. Municipal, denominational and private organizations support the establishment and administration of dormitories and dining halls.

The Federal Government's contribution to these benefits is today relatively high and is increasing from year to year; the actual share, however, cannot be determined as we have no exact data on contributions from other sources. The Federal Government contributes in three different ways to the financing of university studies:

- by direct financial support in the form of grants;
- by subsidies to organizations that offer social benefits (dormitories and dining halls, etc.);
- by paying the costs of social benefits or forgoing payments to be made by students (e.g., health insurance, abolition of university fees...).

As a consequence of the rising student population the increasing importance of tertiary education and the ensuing expansion of universities, the state expenditure for the universities has considerably increased in the past few years.

The following survey shows the development in the past few years:

Table 1: University budget, Federal estimates (1)

	in Sch. million	increase as compared to the respective previous year (in %)	share in the total budget (in %)
1970	2,426.729	15.2	2.40
1971	2,770.208	14.2	2.50
1972	3,353.441	21.1	2.73
1973	3,949.936	17.8	2.84
1974	4,727.418	19.7	2.96

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(1) including research promotion and construction of university facilities

The share of social expenditure in the 1974 Federal budget estimate amounts to some 6.6 percent of the total university budget.
The social expenditure shows a higher rate of increase than the total university budget.

Table 2: "Social expenditure" per enrolled student: by Federal estimates

	1970	1971	1972	1973	1974
"Social expenditure" on total student population in Sch. million	160.140	169.505	204.522	248.027	316.962
Increase over 1970		+ 5.9%	+27.7%	+54.9%	+97.9%
Increase over previous year		+ 5.9%	+20.7%	+21.3%	+27.8%
Regular Austrian and foreign students at universities and art schools, total (1)	53,152	57,930	64,806	70,878	75,000
Increase over 1970		+ 9.0%	+21.9%	+33.4%	+41.1%
Increase over previous year		+ 9.0%	+11.9%	+ 9.4%	+ 5.8%
"Social expenditure" per enrolled student in Sch.	3,013	2,926	3,156	3,499	4,226
Increase over 1970		- 2.9%	+ 4.8%	+16.1%	+40.3
Increase over previous year		- 2.9%	+ 7.9	+10.9	+20.8

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(1) Winter semester 1970/71 until winter semester 1973/74 according to Austrian Central Office of Statistics; 1974/75 estimated.

Thus, the social expenditure on students, i.e., Sch. 317 million in the Federal Budget estimate of 1974, is almost twice as high as four years before. The rate of increase is 28 percent over 1973. The social expenditure per student also increased in the past few years: in 1970 Sch. 3,013 were spent per regular student at Austrian universities and art schools; in 1974, the figure was already Sch. 4,226.

Social expenditure on students is distributed over a number of items in the Federal budget.

The major part of the growth rates results from the increase in grants.

The annual Budget Overdraft Acts resulted in further increases of these funds.

Under the Study Promotion Act some three quarters of the total social expenditure for students go into the promotion of studies, i.e., they take the form of direct financial aid to students.

Table 3: "Social expenditure" for students, rates of increase: by Federal budget estimates

	1970	1971	1972	1973	1974
1/1417/7680 (1) Study promotion (BGBl.Nr. 421/1969)	128,500,000	137,310,000	163,605,000	197,507,000	249,600,000
Increase over 1970, in %		+ 6.9	+ 27.3	+ 53.7	+ 94.2
Increase over previous year,in %		+ 6.9	+ 19.2	+ 20.7	+ 26.4
1/14106/7700 (2) 1/14306/7700 Dormitories	28,300,000	28,251,000	30,768,000	36,626,000	51,350,000
Increase over 1970, in %		- 0.2	+ 8.7	+ 29.4	+ 81.5
Increase of previous year, in %		- 0.2	+ 8.9	+ 19.0	+ 40.2
"Social expenditure" for enrolled students, total	160,140,000	169,505,000	204,522,000	248,027,000	316,962,000
Increase over 1970, in %		+ 5.9	+ 27.7	+ 54.9	+ 97.9
Increase over previous year		+ 5.9	+ 20.7	+ 21.3	+ 27.8

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(1) Item 1/14107/7680 was introduced in 1973; it is the sum total of the previous items 1/14207/7680 and 1/14307/7680.

(2) 1970 to 1973 item 7704

2.6.2 Promotion of studies

Under the Act on Grants-in-Aid (Studienbeihilfengesetz) Austrian citizens attending various types of post-secondary schools are legally entitled to grants of specific amounts provided the students are academically successful and can submit proof of social need. In 1969, this Act was replaced by the Study Promotion Act (Studienförderungsgesetz), which has already been amended several times. (1)

The persons entitles to such grants are at present Austrian citizens studying at any of the below mentioned institutions in Austria:

- universities;
- art schools;
- theological colleges;
- training colleges for primary-school teachers;
- schools for the training of vocational school teachers;
- colleges for social workers;
- schools for the training of teachers at schools of agriculture and forestry;
- schools for para-medical workers.

Austrian citizenship, however, is not the only prerequisite; further conditions are:

- Social neediness: The criterion for social neediness is the parents' income in the last complete calendar year.
  If the student has an income of his own, the latter will be included in the assessment, unless it is derived from vacation work, allowances paid to officials of the Austrian Student Union, from payments received for activities within the framework of university administration or part-time work as scientific assistants at universities, etc.

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(1) The present legal position:
Studienförderungsgesetz 1969, BGBl.Nr. 421/1969 as amended by the Federal acts BGBl.Nr. 330/1971, 286/1972, 335/1973, 182/1974.

This general regulation does not apply to students who had to earn their living for at least four years prior to the beginning of their studies or to students whose parents are dead. The assessment basis for these students is the amount of their own income.

The assessment basis can be reduced by a number of deductible items, especially if the student's parents or he himself have to support one or more persons. The amount of the grant is determined on this assessment basis and ranges from Sch. 2,000 to Sch. 27,000 per academic year. Higher grants are provided for married students and students not living with their parents. Grants are awarded for one academic year and are paid in 10 monthly instalments.

- Academic success:

In the first year of studies the secondary-school leaving certificate is accepted as proof of academic success. In the following semesters the applicant has to submit certificates on examinations specified by the collegiate body of professors (diploma examinations, rigorosa, state examinations, etc.). If the student exceeds the number of semesters prescribed by law for diploma examinations by more than one semester, he can no longer claim academic success.

Once he passed the respective examinations he is again entitled to receive a grant. Exceptions to this general rule exist in those study programmes that are not yet organized pursuant to the General University Studies Act, in particular studies under the old rigorosa regulations at the Faculties of Arts and Sciences.

In addition, the following requirements have to be met:

- Studies must be begun within ten years after reaching the minimum age for university entrance and before completing the age of 35.

- The applicant must not be a university graduate.
- Occupational activities pursued parallel to the studies must not exceed a half-day job.

In principle, there is no obligation to repay the funds received. Exceptions are if

- the recipient of a grant has not achieved a certain minimum level of academic performance at the end of his first year of studies;
- the grant was awarded on the basis of false information.

Scholarships for exceptionally gifted students

In addition to grants for the "socially needy" there are also "scholarships for exceptionally gifted students". This scholarship, amounting to Sch. 5,000 per year, is awarded to ten percent of Austrian regular degree students irrespective of their social situation. In addition to the ten percent clause the following conditions must be met:

- The applicant must be in at least his fourth semester.
- He must not have exceeded the minimum number of semesters prescribed for his study programme.
- He must have received at least the second-best grade for the specified examinations.

In the winter semester 1973/74 (1) 12,094 students at Austrian universities applied for government grants. 10,506 students received a grant; in the case of 50 students the grants were suspended in the course of the semester; nine percent of the applications filed were not considered.

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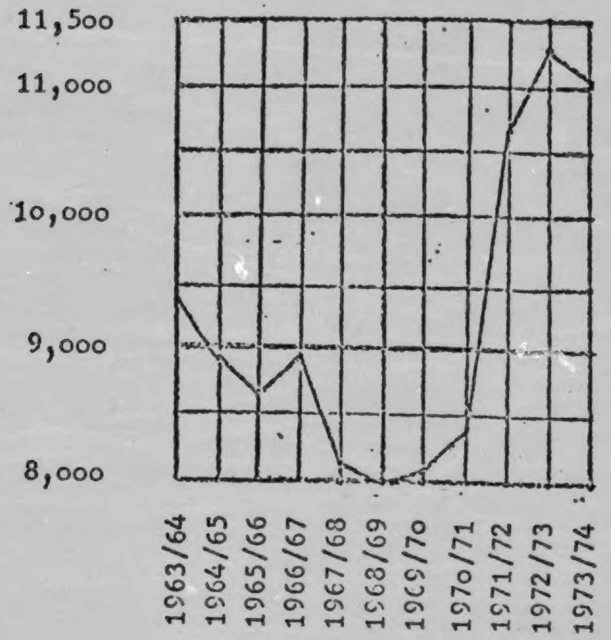
(1) The data for the academic year 1973/74 do not yet consider the changes resulting from the 1974 amendment.

Below a graph on the number of grantees:

Graph 1 Grantees 1963/64 - 1973/74; Austrian regular degree students at universities

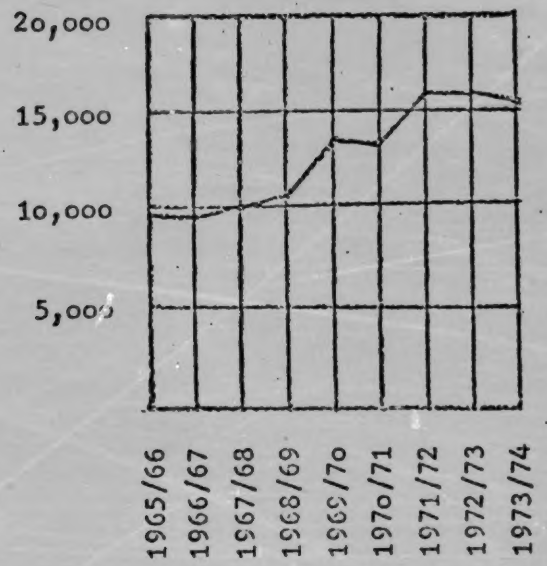


This graph shows two trends:

- The increase in the number of students at universities goes hand in hand with an increase in the number of grantees.
- As a result of wage and salary increases some of the parents' incomes have exceeded the indices that serve as assessment bases. Thus, fewer students are entitled to receive grants unless the assessment bases are periodically adjusted through amendments.

As a result of the interdependence of grants and parents' incomes, wage and salary increases also affect the average amounts received by the grantees.

Graph 2: Average amounts paid to grantees per academic year (universities) 1965/66 - 1973/74



The graph clearly reflects the various amendments of legal regulations of government grants (especially 1969, 1971). The 1974 amendment has not yet been considered. This amendment provides for a considerable rise in the assessment bases and amounts paid to the grantees.

In the academic year 1973/74 the average scholarship amounted to Sch. 15,300. If one relates the average figures to the different awarding conditions one arrives at the following table:

Table 4: Number of grantees: by the amounts granted, academic year 1973/74

	Grants according to sec. 9 of the Study Promotion Act in %		
Sch.	lit. a (1)	lit. b (2)	lit. c (3)
22,000	17	2	-
21,000	-	1	-
20,000	-	1	-
19,000	71	41	-
18,000	1	15	-
17,000	1	6	-
16,000	1	5	-
15,000	1	5	-
14,000	1	5	-
13,000	-	4	27
12,000	-	4	17
11,000	-	1	22
10,000	1	2	8
9,000	-	1	7
8,000	-	1	6
7,000	-	1	3
6,000	-	1	2
5,000	-	1	2
4,000	-	1	2
3,000	-	1	2
2,000	-	-	2
- (4)	6	1	-
Average values	18,130	17,360	10,490

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(1) Students whose parents are dead or who had to earn their living for at least four years prior to the beginning of their studies.

(2) Unmarried students who do not study at their parents' place of residence or married students who do not live with their parents.

(3) All other students entitled to receive a grant.

(4) Grant not classifiable, as funds were cut according to sec. 9, subsec. 6 of the Study Promotion Act.

Apart from the fact that the average scholarship amounts vary depending on the awarding conditions, we note that in all three categories of grantees the grants are concentrated in the top four groups.

In addition to the promotion of studies from social points of view another 3,691 (1973/74) scholarships were awarded to exceptionally talented students enrolled at institutions covered by the Study Promotion Act.

The 1974 Federal budget estimate appropriated a total of Sch. 330 million for grants-in-aid, that is an increase of almost 100 percent over 1970.

Table 5: Budget expenditure in Sch. 1,000 for study promotion (under the Study Promotion Act)

	Universities	Art Schools	Training colleges for primary-school teachers other institutions
1970	119,987	8,151	40,417
1971	132,991	7,101	51,906
1972	193,124	10,279	80,434
1973	212,848		69,000 (1)
1974 (1)	249,600		80,800

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(1) Federal budget estimate, otherwise statements of accounts.

The Study Promotion Act also provides for the possibility of two-semester studies abroad; during this stay the student continues to receive the grant-in-aid.

In addition to these government-promoted studies abroad, there are further programmes:

Scholarships for Austrian students and university graduates through exchange agreements with:
the Federal Republic of Germany, France, Italy, Great Britain, Ireland, Norway, Sweden, Finland, Poland, Czechoslovakia, Hungary, Roumania, Bulgaria, Yugoslavia, Switzerland, Belgium, the Netherlands, Denmark, Turkey, Egypt, India, Columbia, Venezuela, the U.S.S.R., China, Japan, and the Fulbright agreement with the U.S.A.
A foreign schclarship can be awarded only to students who have successfully studied at an Austrian institution of higher learning for at least four semesters. A concrete study or research project must be indicated. The applications are submitted to the Rector's Offices, which in turn forward them to the Federal Ministry of Science and Research. The Ministry checks the formal contents of the applications and submits them to a commission, which is constituted for each individual case. The commission makes a recommendation concerning the awards. The proposal of the commission is then submitted by the Ministry to the respective exchange partner, and this country makes the final decision.

Scholarship programme of the Federal Ministry of Science and Research for scientific activities abroad:
This scholarship programme is a unilateral undertaking of the Ministry. The purpose is to give students in advanced semesters and Austrian university graduates the possibility of going abroad for shorter periods of time (i.e., one to four months as a rule, or in the case of overseas stays, a longer period of time). Above all this programme helps to finance stays abroad in those foreign countries with which Austria does not have any exchange agreements. It also promotes stays abroad which become necessary on short notice, e.g. for library studies, the acquisition of research material, etc. All these scholarships amount to Sch. 4,000; for overseas stays the Ministry may award travel grants.

The Federal Ministry of Science and Research grants unilateral scholarships (mainly to university graduates) for studies in Great Britain, France, Italy, at the Europe College in Bruges and at the Bologna Center in Bologna/Italy; the application and awarding procedures are the same as for the exchange scholarships and the unilateral scholarships for scientific activities abroad.

2.6.3 Subsidies for dormitories, cafeterias and dining halls

At present there are 102 dormitories in Austrian university towns. They can accommodate about 11,000 students (1). None of the 102 dormitories - 66 of which are situated in Vienna alone - are under direct Federal administration. These dormitories were established by public corporations (with the exception of the Federal Government) and private associations, which also administer them. The majority of the dormitories - usually the larger ones - are run by a few organizations and associations: Österreichische Studentenförderungsstiftung, Verein Wirtschaftshilfe für Arbeiterstudenten, Katholische Hochschulgemeinde, Studentenunterstützungsverein Akademikerhilfe. (2)

Though the Federal Government neither administers nor directly finances any of the dormitories, the annual budgetary expenditure on dormatories is considerable. In 1974, Federal contributions to dormitories amounted to Sch. 51 million, i.e., approximately twice the amount of 1971. These funds are used for the foundation of new dormitories and for the improvement and maintenance of existing ones.

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(1) We have no statistical data on the exact number. On the one hand, dormitories have no centralized administration, thus it is very difficult to make an exact survey; on the other hand, their capacity is changing with the reduction in the number of beds/rooms and with the opening of new dormitories or the closing down of old ones.

(2) The brochure "Studieninformation A5 - Studentenheime" includes a list of dormitories. Published by the Federal Ministry of Education and Art, Federal Ministry of Science and Research.

The allocations of Federal budget funds for dormitories have increased markedly especially in the course of the past few years.

Table 6: Federal budget funds for dormitories, dining halls and cafeterias, 1967 to 1974, in Sch.

1967		29,700,000	
1968		27,500,000	
1969		27,000,000	dormitories, dining halls and cafeterias
1970		26,500,000	
1971		25,465,000	
1972	dormitories:	32,330,000	dining halls and cafeterias: 3,510,000
1973	dormitories:	37,983,400	dining halls and cafeterias: 2,450,000
1974	dormitories:	51,000,000	dining halls and cafeterias: 3,922,000

Up to 1974 there was little cooperation between the individual dining halls and cafeterias in the respective university towns. Some of them were directly administered by the Austrian Student Union and some of them were run on a private basis.
In 1974, a plan was worked out for the coordination and rationalization of dining halls and cafeterias at Austrian institutions of higher learning. Early in 1974 the Republic of Austria together with the Austrian Student Union founded the Austrian Dining Hall Company Ltd. (Österreichische Mensen-Betriebsgesellschaft m.b.H., ÖMBG for short
The company is a non-profit undertaking, but the payment-of-costs principle must be observed.

It is the company's aim to rationalize the administration and lower the fixed costs through the coordination of as many dining halls and cafeterias as possible; large-scale purchasing agreements should allow for reduced prices for goods, etc. All these measures should help to offer students high-quality meals at moderate prices.

The company comprises at present five dining halls/cafeterias. The incorporation of other dining halls or cafeterias is envisaged for the years to come. Existing private establishments may join the ÖMBG.

At present there exist no exact data on the number of students frequenting the dining halls. All that we have are the approximate figures on the average number of meals served per day. The dining halls and cafeterias run by the ÖMBG serve some 3,500 meals a day at lunchtime, the private dining halls some 4,500.

2.6.4 Other social measures

Social insurance for students

Students attending institutions who are entitled to receive state support for their studies have also been able to take out health insurance since 1973. Students can be insured with any company to which the provisions of the General Social Insurance Act apply. Thus, they have, with some exceptions, the same rights as other persons insured with these companies.

A monthly contribution of Sch. 105 is at present paid by students enrolled at universities and art schools. Half of the amount is paid by the Federal Government. The Federal budget estimate for 1974 provided five million Austrian schilling for this insurance.

Reduced fares and free rides

According to the provisions of the Family Allowance Act of 1972 (Familienlastenausgleichsgesetz) the majority of young people get their fares to school or to their place of study refunded.

In 1971/72 106,792 pupils or students benefitted from these reduced fares. The refund was paid to their parents or other persons responsible for their education. This financial support is granted for rides between home and the place of study.

In the academic (school) year 1972/73 708,010 persons attending educational institutions at various levels made use of free school rides (public means of transport only). The contributions cover rides to the place of study; the Federal Government reimburses public corporations, Federal enterprises, supporters of schools and municipalities for the fares.

The statistical data available do not allow any exact determination of university students' participation in these benefits.

The 1974 Federal budget estimate included 100 million Austrian schilling for reduced fares and 880 million for free rides. According to a relatively reliable estimate Sch. 6 million and Sch. 147 million, respectively, i.e., a total of Sch. 153 million, were spent for students at institutions of higher learning.

University fees

In the University Fees Act of 1972 the following university fees were abolished for Austrian students:

- contributions toward expenses;
- examination fees including fees for repeated examinations;
- fees for the awarding of academic degrees;
- laboratory fees;
- fees for the issuance of certificates;
- immatriculation fees for regular degree students and registration fees for non-degree students and auditing students.

Some fees, such as those to be paid by foreign students, however, were not abolished. For those students there are a number of special provisions which put them on an equal footing with Austrian students. Starting with the academic year 1972/73 an average of more than Sch. 700 has been lost per registered student per academic year, as a result of the University Fees Act.

For 1973 the loss of revenue is estimated at Sch. 42 million and for 1974 at Sch. 46 million.

Family allowance

Another form of state support is the continuation of family allowance payments to parents whose sons or daughters have no independent income and are not older than 27 years.

It is assumed that about 70 percent of the students' parents receive this kind of support. According to rough estimates the Federal Government spent about Sch. 137 million in 1973 and Sch. 165 million in 1974 for this purpose.

Table 7: Estimate of total "social expenditure" for students in Sch. million

		1973	1974
"Social expenditure" for Austrian regular degree students, total (university budget)		248.027	316.962
Free rides under sec. 30, lit. f of the Family Allowance Act	approx.	101.000	147.000
Reduced fares under sec. 30, lit. a of the Family Allowance Act	approx.	12.000	6.000
Loss of revenue as a result of the 1974 University Fees Act	approx.	42.000	46.000
Total (estimated)	approx.	403.027	515.962
Increase 1973 to 1974 in %			+ 28.0
Family allowance for supporters of students who are below the age of 27, unmarried and not employed	approx.	137.000	165.000

In 1974, the Federal budget provided more than Sch. 510 million for public social expenditure, i.e., an average of Sch. 7,000 per registered student. In addition to these benefits there are some Sch. 165 million paid to students' families out of the Family Allowance Fund (Familienlastenausgleichsfonds); this fund is financed directly through taxes.

Two investigations into the social situation of students were conducted on behalf of the Federal Ministry of Science and Research: one on the social situation of students and one on the special position of married students in our society. (1)

A detailed investigation into students' expenses is planned for the winter semester 1974/75. Extensive surveys on students' accommodations are part of the present research project. After the conclusion of all these investigations the results thereof will be presented in one collective publication.

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(1) IFES, Soziale Lage der Studenten, Vienna 1974, unpublished research report; Wössner J., Zur Soziallage verheirateter Studenten, Linz 1973, published in: Schriftenreihe des Instituts für Allgemeine Soziologie und Sozialphilosophie [illegible] der Hochschule Linz

2.7 REPRESENTATION OF INTERESTS

2.7.1 Participation of political institutions

Under the Austrian Federal Constitution enabling acts or regulations replacing laws are not admissible; they would be unconstitutional. The basic principles of any measure to be taken have to be determined by a Federal act. The implementation may be effected by a regulation of an administrative authority, e.g., the Federal Ministry of Science and Research, or an academic authority.

Thus, according to the Austrian Federal Constitution, the legislator plays an extremely important part in creating the legal provisions for the universities. This, however, does not include the preparation of the drafts that are submitted by the Government to the legislator for further action. This procedure is also governed by law: on the one hand, the legislation on tertiary education requires that certain agencies give expert opinions; on the other hand, there are a number of public corporations (Chambers) that are authorized by law to review these opinions. Although not directly prescribed by law, for practical reasons it is indispensable that all Federal Ministries and Provincial governments are engaged in this procedure, since the Federal ministers have the right to veto Federal Government decisions on bills; the Provincial governments as well may contest Federal acts. For this reason a comprehensive review procedure takes place before the draft is dealt with by the Federal Government. The Student Union, which by Federal act is organized as a public corporation, must also be consulted in connection with bills and decrees on higher education. Furthermore the General University Studies Act (sec.3, subsec.4) stipulates that the Federal Ministry of Science and Research has to convene meetings to discuss proposals concerning the enactment or amendment of special studies acts or other issues of general importance (e.g., if a ministerial study regulation is issued for the first time).

Representatives of the academic authirities of the universities concerned (Faculties), representatives of the Austrian Conference of University Rectors, the Academic Council and the Austrian Student Union have to be invited to these meetings.

Thus, the drafting of a university bill or a ministerial study regulation presupposes not only a review procedure, but also a public discussion on the proposals concerned. Opinions submitted by university representatives to the Federal Ministry of Science and Research are juxtaposed to the ideas as expressed by the government and by cultural and economic circles.

Experience has shown that the representatives of labour and management (Chamber of Labour, Federal Chamber of Trade, Commerce and Industry, Austrian Federation of Trade Unions, Federation of Austrian Industrialists) are often very seriously concerned with university issues.

According to a resolution of the "Nationalrat" (lower house of parliament), all agencies authorized or invited to give an opinion are requested to submit their statements also to the board of the "Nationalrat". This guarantees that not only the Federal Ministry of Science and Research receives the relevant information from various groups in the administration, culture, economy, etc., but that also the delegates to the "Nationalrat" are informed about the attitudes of these interest groups. These representatives need this information for the subsequent discussions of said bills in parliament.

The Austrian Conference of University Rectors (see 2.7.5) and the Academic Council are also required by law to cooperate in university matters. The Academic Council consists of 15 members; five of them are appointed by the Federal government (taking into consideration the composition of the Main Committee of the "Nationalrat"; five are appointed by the Austrian Conference of University Rectors and the remaining five by the Federal Minister of Science and Research mainly from the academic staff at the institutions of higher learning.

In the past few years the Academic Council has not been very active. The government bill on a University Organization Act includes more detailed provisions concerning its responsibilities.

2.7.2 Public and autonomous spheres of competence

The degree-granting institutions of higher learning (called universities in the government bill on the University Organization Act) are Federal institutions. University administration forms part of public administration and thus has responsibilities in the public sphere. In this public sphere the universities are directly responsible to the Federal Ministry of Science and Research.

The public sphere of competence must be distinguished from the autonomous sphere of competence of the universities. Within the latter the universities are not subject to control through public authorities; their organs adopt legally binding administrative measures on the basis of the existing legislation. The public and the autonomous spheres of competence of the universities are governed by the University Organization Act of 1955 to be replaced by a new University Organization Act.

This autonomy of the universities is regarded as a matter of expediency necessary for the fulfilment of the responsibilities of these institutions.

The universities are an integral part of the educational system. With a few exceptions the training of the entire highly qualified staff in post-secondary education in Austria takes place at the universities.

Scientific research has become a process which goes beyond the private interests of individual researchers and cannot be determined by them alone. (1)

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(1) In this connection see M.Fischer-H.Strasser "Selbstbestimmung und Mitbestimmung der österreichischen Universitäten" for the Federal Ministry of Schience and Research, Institute for Advanced Studies, Vienna 1973. M.Fischer-H.Strasser "Autonome Entwicklungsmöglichkeiten der Universitäten", vol.I, for the Federal Ministry of Science and Research, Institute for Advanced Studies, Vienna 1974.

This development of scientific training and research has increased the need for state intervention in order to ensure the fulfilment of the social tasks of the universities and to prevent the predominance of particular social interests. The state supervision of universities is, on the one hand, expressed by the integration of university administration into public administration (supervisory power of the competent Federal ministry) and, on the other hand, by the inclusion of the university budget in the Federal budget.

The social need for public control of the universities is juxtaposed to the need for unrestricted scientific discussions in research and education.

The scientific discussion of questions concerning nature and society, the acquisition of scientific knowledge and innovatory abilities is only possible if the aims of scientific research and teaching are clearly defined; the techniques and findings of this process must not be subject to administrative intervention. These concepts are expressed in the legal provisions concerning the autonomous sphere of competence of institutions of higher learning.

The tasks of university administration in the public sphere are laid down in the University Organization Act of 1955 (sec.3); they comprise all tasks that do not explicitly fall within the autonomous sphere of competence of the universities.

Under the University Organization Act (sec. 26, 30, 38, 42, 44, 52) the autonomous sphere of competence of the universities comprises:

- preparation of budget estimates and proposals on the institution and distribution of authorized posts;
- proposals concerning the appointment of chair holders;
- granting of veniae docendi ('habilitatio') and the appointment of other teaching staff (persons with a special teaching assignment, etc., ...);
- proposals on the recruitment of scientific and non-scientific personnel;
- elaboration of rules of procedure for the university bodies;
- guarantee of a complete course-offering at institutions of higher learning;
- election of rectors and deans, etc.;
- Requests for the creation, definition, classification and discontinuation of chairs, departments and clinics;
- decisions on the contents and execution of "Hochschulkurse";
- elaboration of expert opinions;

- execution of gratuitous legal transactions, such as acceptance of heritages,legacies, etc.;
- membership in associations, the purpose of which is the promotion of institutions of higher learnings;
- awarding of academic degrees and honorary titles.

For the fulfillment of these tasks within the autonomous sphere of the universities the individual academic bodies are assigned special responsibilities.

2.7.3 Co-determination

The present legislation provides for a certain degree of co-determination of representatives of the academic intermediary staff. The government bill on the University Organization Act goes much farther; it includes three provisions concerning the co-determination of students and assistants at the universities.

Most of the present studies acts provide for study commissions which are entitled to make decisions on issues concerning academic study regulations. The commissions have a tripartite composition: university professors, the academic intermediary staff and the students.

Through the amendment (BGBl.151/1972) to the University Organization Act of 1955 assistants and students can take part in the decision-making process of academic bodies via the study commissions.

According to this amendment

- delegates of assistants and students may be admitted to standing and non-standing commissions of the respective collegiate bodies of professors; these delegates do not only have a consultative function, but are regular members with the right to vote;
- it is not only in individual cases that representatives of assistants and students can be consulted by the individual collegiate bodies of professors; they may permanently attend the meetings of the collegiate body and may be granted the right to introduce motions.

This amendment to the University Organization Act is not binding; the implementation is at the discretion of the individual collegiate bodies of professors.

In reality only some of the collegiate bodies of professors have implemented the amendment and have granted assistants and students a seat and the right to vote in the commissions. In a number of cases, however, they were admitted as non-voting members with the right to introduce motions. The number of delegates to the various bodies differs; with students it ranges from 1 to 6 and with assistants from 1 to 8. Unfortunately, no details on the implementation of the provisions of this amendment are available.

The Federal act on the foundation of the Klagenfurt School of Educational Sciences (BGBl. 48/1970) includes provisions for co-determination. The foundation committee is composed of an equal number of professors and assistants.

Study commissions

The new studies acts provide for the establishment of new academic authorities, i.e., the study commissions, with equal representation of professors, assistants and students. The autonomous sphere of competence of these commissions comprises:

1) issuance of academic study regulations;
2) preparation of recommendations on the organization of courses and examinations;
3) investigation into the causes of delays in studies and preparation of recommendations to remove such causes;
4) certain approvals for the organization of studies (e.g., alternative subjects) and examinations.

So far the study commissions have been quite successful. They have accomplished a number of things that the collegiate bodies of professors could not do at all or not to a sufficient extent, particularly in the field of the didactically and methodically correct organization of university studies through academic study regulations.

The practical experiences with the study commissions were as follows:

- There have been fewer conflicts than expected.
- The working methods of the study commissions are somewhat complicated and time-consuming.
- Even in study commissions where the participants have only a few differences on subject matters, questions of organization, rules of procedure and record-keeping were rather difficult to settle and required too much time. This was bound to have a negative impact on the fulfilment of the actual tasks of the study commissions, above all, on the issuance of the academic study regulations.

The Federal Ministry of Science and Research has to issue the ministerial study regulations, which should serve as a framework for equivalent, but certainly not identical study programmes at the different universities and Faculties. The Ministry cannot issue such regulations for a specific study programme unless it knows, at least in general, the opinions of the study commissions at the different Faculties and universities on the study programme concerned. Thus, the study commissions had to first overcome all difficulties in connection with rules of procedure, cooperation, record-keeping, etc. Then they had to discuss the organization of the relevant study programme, draft their propositions and submit them to the Federal Ministry of Science and Research. The Ministry had to coordinate the opinions of the different study commissions; it was not always possible to immediately arrive at a mutual agreement among the different study commissions. Then the draft regulation of the Federal Ministry of Science and Research had to be submitted to a general review procedure again including the study commissions. After the ministerial regulations were issued the study commissions had to draft the academic study regulations for their Faculties (universities).

Experience has shown that usually three or four semesters were needed to complete this work. This period of time may appear to be rather long; however, two things must be taken into consideration:

a) Methods of cooperation between the different groups of persons involved in universities matters had to be developed;
b) The study commissions as well as all other bodies at the universities and the Federal Ministry of Science and Research only had part of the exact information on the course of studies to date as well as on the conclusions to be drawn from the development of the field of knowledge concerned and the practical requirements.

The approach to the regulations of studies is a two-fold one: The representatives of science justifiably emphasize the completeness and complexity of scientific education and training.

The "customers" of the universities, i.e., the government, cultural institutions, trade and industry, very often have highly diversified demands on the knowledge and capabilities of graduates. Frequently there is no adequate scientific material available. Finally, one must take into consideration to what extent plans can be realized with the available university facilities and personnel. Thus, the study commissions have a great responsibility and have usually exercised great care and conscientiousness in the execution of their tasks. Bearing all these factors in mind, a period of three or four semesters cannot be considered excessive for the reorganization of studies.

The experience since 1969 has shown that the study commission with tripartite representation of professors, assistants and students by and large have fulfilled the expectations. Their establishment met an urgent need. After study commissions were set up by the respective acts at the technical universities, study commissions were spontaneously organized at a number of other universities by agreement between professors, assistants and students. Though without any legal mandate, these study commissions tried on an informal basis to fulfil the same tasks as those of the study commissions that were established by law at the technical universities. The co-determination model implemented in the study commissions concerning the organization and implementation of the university studies is generally regarded as a success in Austria - some reservations obviously exist.

2.7.4 Austrian Student Union

The Austrian Student Union is a public corporation with a compulsory membership for all students at Austrian universities. Internationally speaking its organization is unique and can not be compared with organizations of student associations in other countries.

The Austrian Student Union goes back to the First Republic (1). When in 1945 the student unions were founded at the individual institutions of higher learning (2), the name was the only thing they had in common with the pre-war organizations. They did not yet have the status of public corporations; it was their task to help the students in the chaotic aftermath of the war and to offer a democratic counterweight to the national socialist traditions of the student population. It was only in 1947 (3) that the individual student unions were organized as public corporations.

By the Student Union Act of 1950 (BGBl. Nr. 174/1950) the Austrian Student Union was established as a public corporation with compulsory membership representing all Austrian students.

Based on the new version of the Student Union Act of 1973 (BGBl. Nr. 309/1973) the responsibilities and rights of the Austrian Student Union were extended and adapted to meet current requirements.

All Austrian and foreign regular degree students and non-degree students at Austrian universities and art schools are members of the Austrian Student Union.

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(1) For the history of the Austrian Student Union see: E.Cyba "Studentenpolitik in Österreich", 1974, on behalf of the Ministry of Science and Research, especially pages 37 ff.

(2) StGBl.Nr. 17o/1945

(3) BGBl. Nr. 249/1947

The foremost responsibilities of the Austrian Student Union are:

- representation of student interests vis-à-vis public authorities through the right to review bills and ministerial regulations;
- representation of student interests in the relevant university bodies;
- assistance and promotion of students through academic and student counselling;
- social and cultural services for students.

The active right to vote for representatives to the various bodies is granted to all regular degree students at Austrian universities. The passive right to vote is extended only to Austrian regular degree students.

There are representative bodies at four different levels:

- at the departments and in the study programmes (department and study programme representatives);
- at the Faculties, provided an institution of higher learning has such a structure (Faculty representatives);
- at the individual institutions of higher learning (Main Committees);
- at the Federal level (Central Committee).

With the exception of the lowest level where candidates are elected on a personal basis, tickets are voted for. The representative to the bodies at the lowest level of representation are elected annually, at the three upper levels bi-annually.

The voting participation in Student Union elections is markedly below the turn-out for elections to the Federal Parliament, the Provincial Diets and other political bodies.

However, it more or less corresponds to the turn-out in elections for similar public corporations (Chambers of Labour, Chambers of Agriculture).

Over the past years the political composition of the Austrian Student Union has changed slightly.

Table 1: Elections to the Central Committee of the Austrian Student Union (1946 to 1974)

(votes in %)

Year	FÖST ÖSU(2)	RFS(3)	VSStÖ(4)	Aktion(5)	VDS(6)	LKH(7)	GRM(8)	Other
1946	75	-	22	-	3	-	-	-
1948	71	-	26	-	4	-	-	-
1949	72	-	24	-	4	-	-	-
1951	58	18(9)	21	-	3	-	-	-
1953	49	32	17	-	2	-	-	-
1955	56	31	12	-	2	-	-	-
1957	60	29	12	-	1	-	-	-
1959	58	27	14	-	1	-	-	-
1961	57	27	14	-	1	-	-	-
1963	55	27	12	-	1	-	-	5(10)
1965	58	29	12	-	2	-	-	-
1967	49	30	13	5	-	-	-	3(11)
1969	49	29	12	8	1	-	-	2(11)
1971	54	25	11	8	2	-	-	-
1974	48(12)	21	16	5	3(13)	5	3	2(14)

For comments see next page

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(1) Line total not always 100 percent due to editing errors in the source material

(2) Freie Österreichische Studentenschaft (FÖST) (1946 to 1951), then Wahlblock (composed of Österreichischer Cartellverband, Kartellverband, Österreichische Landsmannschaften, FÖST) up to 1967, since then Österreichische Studenten Union (ÖSU).

(3) Ring Freiheitlicher Studenten (RFS)

(4) Verband Sozialistischer Studenten Österreichs (VSStÖ)

(5) Aktion

(6) Vereinigung Demokratischer Studenten

(7) Liste Kommunistischer Hochschulorganisationen (LKH)

(8) Gruppe Revolutionärer Marxisten

(9) In 1951 the "Studentische Wahlgemeinschaft und der Bund unabhängiger Studenten", a forerunner of the RFS, ran for election.

(10) "Neues Europa", a student organization originating at the Vienna School of Economics.

(11) "Arbeitsgemeinschaft fortschrittlicher Studenten" (AFS) and "Christlich-demokratische Studentenschaft" (CDS)

(12) Team (Innsbruck), "Liste Marlene Streeruwitz", "Liste unabhängiger Studentinnen".

(13) „At the Graz institutions of higher learning the "Club Sozialdemokratischer Studenten" ran the election instead of the VSStÖ.

(14) Fraktion Katholischer Theologie.

2.7.5 Austrian Conference of University Rectors

The Austrian Conference of University Rectors is by law established as an organ of the eighteen universities and art schools in Austria. It is the main task of the Conference of University Rectors to act as a forum in which the representatives of the institutions of higher learning can discuss issues related to higher education. The sphere of competence extends to all matters where two or more institutions of higher learning are involved. The consultations serve to formulate opinions and achieve some degree of coordination. The results of these consultations are included in "Recommendations" to the institutions of higher learning which, though not legally binding, become effective as "Guidelines".

In addition to these consultations which concern internal university matters, the Conference of University Rectors is also authorized to represent university interests toward the public. It submits proposals on all university matters, to the Federal Ministry of Science and Research - a special right of petition granted by law - and has the duty to elaborate opinions and comments on specific issues related to the institutions of higher learning upon the request of the Federal Ministry. De facto the right to take initiatives and to express opinions is applied so liberally that the Conference of University Rectors comments on practically all issues affecting tertiary education.

In the Conference of University Rectors the universities are represented by their supreme academic organ, the Rector. The prorectors and the deputies of the rectors participate in the work of the Conference in a consultative function. The Rector of the University of Vienna is ex lege the chairman of the Conference of University Rectors.

The University Organization Act of 1955 is based on the assumption that not all issues discussed by the Conference of University Rectors also affect the art schools; it states explicitly that the Rectors of these institutions should only be invited if the subject of the discussions is also relevant to them. The past few years have shown, however, that hardly any matter related to tertiary education affects universities alone. In practice, the Conference of University Rectors does not discriminate between art schools and universities. On the contrary, the Conference has deliberately promoted an integration of universities and art schools.

2.7.6 Associations

While the interests of the students are represented by a public corporation, the Austrian Student Union, the interests of the academic intermediary staff are safeguarded in several ways; at first, through the bodies created by the Federal Act on the Representation of Personnel (Bundes-Personalvertretungsgesetz), BGBl. Nr. 133/1967. Under this Act a Central Committee and the Staff Committees (at the individual institutions of higher learning) are to be established for the representation of university teachers; the delegates are elected by professors and university assistants. In addition, there are also committees for "Other Personnel", to which certain categories of assistants belong who are not civil servants.

Second, there is the "Verband des wissenschaftlichen Personals der österreichischen Hochschulen (Assistentenverband)", the national organization of the local "Assistentenverbände" at the individual institutions of higher learning. The statutes of some of these associations (e.g., at the University of Vienna) also provide for membership of university professors.

The interests are furthermore represented by the "Gewerkschaft der Öffentlich Bediensteten", subdivision university teachers, and by individual Chambers, above all, the Chamber of Physicians. There are also the "Verband der Lektoren und Lehrbeauftragten" as well as the "Bundesverband der wissenschaftlichen Beamten an den österreichischen Hochschulen", which also represent the interests of the academic intermediary staff.

The interests of professors are represented by the "Professorenverband".

2.8 FOREIGN STUDENTS

2.8.1 Attendance

In the winter semester 1973/74 9,386 foreign students were registered at Austrian universities, i.e., 13 percent of the total student population. Of these, 8,237 were regular degree students. The number of foreign non-degree students is relatively high in comparison with Austrian students, namely, 11 percent, because a certain percentage of foreigners, who have no equivalent secondary-school leaving certificate, are not accepted as regular degree students immediately upon their application for admission, but only after having passed the respective examinations (see 2.2.1).

The foreign students come from approximately 90 European and non-European countries; more than 50 percent from the highly industrialized countries of Western Europe. Students from the developing countries account for almost one fifth of all foreign students.

Table 1: Foreign students at Austrian universities (geographic distribution) regular degree students, winter semester 1973/74

	in %
Highly industrialized countries of Western Europe	52.1
Eastern Europe (1)	5.6
Southern Europe (2)	15.0
Highly industrialized non-European countries	4.2
Developing countries	18.4
Stateless, unknown	4.7
Total	100.0 (N = 8,237)

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(1) Including Yugoslavia

(2) Including Turkey

The majority of foreign students from developing countries, namely 16 percent, come from Asian countries.

Almost two thirds of the foreign students come from only four countries: Federal Republic of Germany, Italy, Greece, Iran. The traditionally largest group are the students from the Federal Republic of Germany; they account for more than 25 percent of all foreign students in Austria.

Most of the foreigners study at the University of Innsbruck (approx. 2,340), at the University of Vienna (842), at the Technical University of Graz (984) and at the University of Graz (810).

There are traditional "foreigners' universities": The share of foreigners at the Technical University of Graz amounts to 24 percent, at the Leoben School of Mining and Metallurgy 23 percent, at the University of Innsbruck 26 percent.

Students coming from the countries of Western Europe preferably attended universities, i.e., 82 percent: (37 percent in Innsbruck, 23 percent in Vienna, 12 percent in Graz, and 9 percent in Salzburg). 48 percent of the students coming from Southern Europe study at the Technical Universities of Vienna and Graz. From among the students coming from the Asian developing countries the largest groups of students study at the Universities of Vienna (29 percent) and Graz (12 percent) and at the Technical Universities of Vienna (16 percent) and Graz (16 percent).

The largest number of foreigners are found in the technical study programmes (25 percent), in arts and sciences (27 percent), in medicine (17 percent), and in economics and social sciences (15 percent).

A relatively high percentage of foreigners are enrolled in the study programmes of the Leoben School of Mining and Metallurgy (24 percent), theology (24 percent), medicine (16 percent), and technology (15 percent).

Table 2: Foreign students in groups of study programmes (regular degree students, winter semester 1973/74)

Groups of study programmes	number	in %	share in the total number of students per study programme, in %
Theology	364	4	24
Law	331	4	7
Social and economic studies (1)	1,254	15	12
Medicine	1,413	17	16
Arts and sciences	2,219	27	9
Pharmacy	105	1	8
Translation and interpreting	220	3	17
Technology	1,863	23	15
Mining and metallurgy	166	2	23
Agriculture	181	2	15
Veterinary medicine	91	1	13
Studium irregulare	30	.	12
Total	8,237	100	12

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(1) including the expiring predecessors: economics, political science and commercial science

In the winter semester 1973/74, 1,333 foreign regular degree students first registered at an Austrian university, i.e., 16 percent of all foreign students. Of these 973 (73 percent) registered at the Universities of Innsbruck (46 percent) and Vienna (27 percent).

The traditionally high figures for foreign students attending Austrian universities has remained constant over the past few years. During the first half of the 1960's a greater number of foreign students, namely, between 9,000 and 10,000, were registered at the Austrian universities. As a consequence of the high increase in the number of registrations of Austrian students, the share of foreigners has been declining. This development is clearly reflected in the percentage figures:

Table 3: Percentage of foreign students (regular degree students)

1966/67	20 %
1967/68	19 %
1968/69	18 %
1969/70	17 %
1970/71	16 %
1971/72	14 %
1972/73	13 %
1973/74	12 %

The percentage of foreign students decreased in some study programmes (medicine, technology, veterinary medicine) as a consequence of admission restrictions for foreigners introduced for such study programmes in 1973/74, whereas the number of foreign students rose considerably in arts and sciences and social and economic study programmes. At the Faculties of Arts and Sciences the humanities and social sciences have been mainly affected by the increase.

It may be assumed that the admission restrictions for a number of study programmes do not prevent a certain percentage of foreign students from entering upon studies at an Austrian university. In such a case, a trend, similar to that in the Federal Republic of Germany itself, can be observed particularly among students from the Federal Republic of Germany studying in Austria: they change over to different studies.

2.8.2 Admission to studies

There are two major problems concerning the admission of foreign students to Austrian universities as regular degree students:

- the recognition of foreign secondary-school leaving certificates;
- admission restrictions for foreign students.

The recognition of secondary-school leaving certificates

Foreign applicants have to submit certificates which entitle them to study at a university in their home countries and which are equivalent to the Austrian secondary-school leaving certificate. For students from most of the European countries the equivalence of secondary-school leaving certificates - apart from possibly required supplementary examinations, such as in the German language, - is guaranteed by the "European Convention on the Equivalence of Diplomas Leading to Admission to Universities" (1953), of which Austria is a party. With students from certain European countries as well as countries outside of Europe the equivalence of secondary-school leaving certificates has to be assessed in each individual case. Until the academic year 1973/74 the following regulation was in force: If a given secondary-school leaving certificate was not acknowledged as equivalent, the student concerned had to take a preparatory course programme. These programmes were organized by the Austrian Foreign Student Service (Österreichischer Auslandsstudentendienst) and normally lasted for two or three semesters.

The syllabi and the organization of such programmes have partly come under severe criticism. New proposals for such programmes are being discussed.

Admission restrictions

Apart from the general admission clause that entitles foreign students to immatriculate as regular degree students at Austrian universities, there are special provisions governing the admission of foreign students to specific [illegible] programmes.

As a consequence of the unexpectedly high number of applicants from the Federal Republic of Germany, who did not get the desired study places in their home country, admission restrictions had to be decreed for some study programmes in the winter semester 1973/74.

These restrictions are neither in contrast to the provisions of the General University Studies Act nor do they constitute a violation of the agreement reached under the "European Convention".

In anticipation of an excessive number of applicants for some study programmes, the universities had to fix maximum quotas for the admission of foreign students.

The following study programmes were affected by this arrangement in the winter semester 1973/74:
University of Vienna: biology, chemistry (including biochemistry and food chemistry), psychology, medicine, pharmacy, geography, physical education, human biology;
University of Graz: biology, chemistry (including biochemistry and food chemistry), psychology, medicine, pharmacy, geography, physical education;
University of Innsbruck: biology, chemistry (including biochemistry and food chemistry), psychology, medicine, pharmacy, physical education, architecture, geography;
University of Salzburg: biology, psychology, geography, physical education;
Technical University of Vienna: architecture, chemistry;
Technical University of Graz: architecture, chemistry;
Vienna School of Veterinary Medicine: veterinary medicine.

In accordance with an agreement reached by the Rectors of the Austrian universities, following an initiative of the Federal Ministry of Science and Research, the universities at present proceed uniformly in matters of admission, especially concerning the fixing of quotas for the admission of foreign students.

The above mentioned regulations concerning the admission of foreign students are supplemented by the following stipulations:

- Apart from an equivalent secondary-school leaving certificate students coming from the Federal Republic of Germany must submit the admission permit issued by the "Zentralstelle von Studienplätzen" (Central Agency of Study Places) in Dortmund if they apply for admission to a study programme which is a numerus clausus programme in the Federal Republic of Germany.
- Under inter-governmental agreements foreign students from certain countries shall receive the same treatment as Austrian students as concerns admission restrictions;
- As long as study places are available, the universities may continue to admit recipients of Austrian scholarships, graduates from preparatory programmes, and students from developing countries.
- The admission is granted for only one study programme at a time.

Tuition fees for foreign students

Under the University Fees Act of 1972 most fees to be paid by regular degree students were abolished.
In principle, foreign students were excluded from this regulation; they have to pay a tuition fee of Sch.1,500.- per semester.

However, this regulation does not apply to a large number of foreign students:

- students, who, or whose parents, have been liable to taxation in Austria for six years;
- a certain number of foreign recipients of scholarships;
- students from countries in which Austrian students are exempt from university fees;
- students from developing countries.

Although exact statistical data are not available, it can be assumed that, as a consequence of these exceptions, only a small proportion of the foreign students have to pay fees.

2.8.3 Scholarships

The Federal Ministry of Science and Research grants scholarships to students at Austrian universities.

1. Programme: "Applicants from all over the world"
   Under this programme university graduates from various countries are granted a one-year scholarship up to the maximum amount of Sch. 3,600.-. Every year about 40 students are granted such scholarships. The 1974 Federal budget estimate provided Sch. 1.27 million for this purpose.

2. Scholarships for refugees under the Geneva Convention
   These scholarships may be awarded to all foreign students who, under the regulations of the Geneva Convention, have the status of refugees. The 1974 Federal budget estimate provided Sch. 36,000.- for this purpose.

3. Scholarships under exchange-programmes
   In bilateral agreements the Federal Republic of Austria has undertaken obligations as a result of which foreign students and university teachers come to Austrian universities on an exchange basis for a limited period of time. Under this programme students get a monthly scholarship of Sch. 3,600.-. Under the above agreements the Federal Ministry of Science and Research grants 63 scholarships per year (among them 12 for Academies of Art) and 49 scholarships for summer courses. The 1974 Federal budget estimate provided Sch. 4.5 million for expenses under "responsibilities resulting from bilateral cultural agreements".

Apart from scholarship programmes which fall under the responsibility of the Federal Ministry of Science and Research, the Republic of Austria also grants scholarships to students from non-European developing countries; they are awarded by the Federal Chancellor's Office in connection with the Austrian development aid programmes.

There are some further institutions that grant scholarships to foreign students: the Afro-Asian Institute in Vienna, the Federal Chamber of Trade, Commerce and Industry, the Caritas of the Arch-diocese of Vienna, the International Forum-Student Club, the Catholic Women's League of Austria, the Austrian Latin America Institute, and the Freedom from Hunger Campaign.

2.9. TRAINING OF FUTURE SCIENTISTS

Future scientists of the universities are recruited in a traditional way. The typical career of a full professor exhibits the following stages: doctorate degree (after a diploma in some cases) - assistant - "habilitatio" - appointment to professor. Usually a person goes through these various stages at the same university. Scientific careers via extra-university or non-scientific professional work after graduation are rather unusual; if at all such careers are to be found in the technical study programmes. (1)

2.9.1 Doctoral studies

The General University Studies Act of 1966 differentiates between two categories of regular university studies: scientific professional training leading to a diploma and, starting with this diploma, further training and education leading to a doctorate degree as qualification for independent scientific work. The legal provisions suggest that the completion of doctoral studies is as a rule considered to be the prerequisite for a scientific career. At present there still exists a discrepancy between reality and the objectives of the General University Studies Act. However, the process of reorganizing the study programmes will soon be completed.

Of the 4, 402 degrees acquired in the academic year 1972/73, 1,944 (i.e. 44 percent) were doctorate degrees. Not all students acquire a doctorate degree, because they want to pursue a scientific career. (2) Students who write a disseration after having completed their diploma studies have various reasons other than a scientific motivation for doing so:

- they are basically interested in the studies;

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(1) Empirical proof is provided by random samples from a current investigation into the careers of professors, carried out by the Federal Ministry of Science and Research. A detailed analysis is not yet available.

(2) There are a number of study programmes, particularly under the old ministerial study regulations, where the doctorate degree is the only or predominant mode of graduation

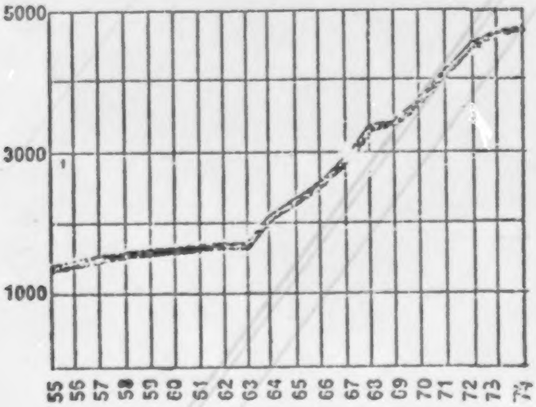
- they want to bridge the time-gap between graduation and the beginning of their extra-university career;
- they want to attain a higher social status;
- they want to make use of further educational possibilities; etc.

The available statistics do not allow an exact determination of the potential number of future scientists among candidates for a doctorate degree and among students in higher semesters (see also section 2.4.).

2.9.2. Assistants

Increasing student figures and the implementation of the General University Studies Act which has led to an expansion of teaching activities, especially as concerns exercise type courses, necessitated a marked increase in the number of assistants as they are best suited to work with students in small groups. The increase in the number of authorized posts also means that more young scientists can work at universities.

Graph 1: Authorized posts for university assistants 1955-1974



Source: Schema of authorized posts

37 percent of the 4,628 authorized posts for assistants in 1974 were provided for the Faculties of Medicine of the Universities of Vienna, Graz and Innsbruck; 26 percent of the authorized posts for the Technical Universities and Faculties and 23 percent for the Faculties of Arts and Sciences of the Universities of Vienna, Graz, Innsbruck and Salzburg.

As universities have become institutions for mass education the position of assistants has changed accordingly. In the inter-war period assistants were young scientists in the true sense of the word; almost every one of them had the possibility to become full professor by habilitation and appointment.

An effective study reform requires: intensification of studies, reduction of the duration of studies and more favourable student/teacher ratios in exercises, practicals, preparatory seminars, seminars and other exercise type courses. All the above courses depend on the intense cooperation of a relatively large number of highly qualified members of the academic intermediary staff, especially assistants, but also civil servants in the scientific field. Thus, a larger number of assistantships had to be provided for in the course of the study reform. As a consequence the number of assistants per professor increased. In the long run, this means that a smaller proportion of assistants will be able to actually enter upon the career of a university professor.

Two measures were adopted to remedy this situation: the assistants' career opportunities were enhanced by the creation of "a new type of associate professor". Assistants with a venia docendi may reach the position of this "new type of associate professor" by simple appointment, if they hold a prominent position in science or teaching, i.e. if they head a certain section of a department, a laboratory or a hospital ward, etc. These new associate professors have a seat and the right to vote in the collegiate bodies of professors; as concerns representation within the academic community, they fall into the category of professors, but they cannot become department heads, chair holders, or university officials.

In the long run, the question will have to be resolved as to whether or not the present system can be upheld under which the assistant can continue his university career only if he acquires the venia docendi. As the assistants engage in scientific work they cannot at the same time specialize in teaching, particularly not in exercises, practicals, preparatory seminars, seminars and other exercise type courses, though these courses may become more attractive by their scientific work. However, these specialists are the very persons who are urgently needed for the intensification of instruction and the improvement of the teacher/student ratio in exercise type courses. It will most likely be necessary to create a new type of assistant, the "teaching assistant" who is an expert in didactics, who can teach students on a very personal level in exercise type courses. Similar concepts exist concerning the employment of highly qualified experts for routine scientific work at universities.

2.9.3 "Habilitatio"

The habilitation as prerequisite for acquiring the venia docendi for a certain subject is of crucial importance for a university career. As a rule habilitation is also the prerequisite for appointment as professor.

At present the habilitation procedure is governed by a ministerial regulation of 1955. (1) The procedure lies within the autonomous sphere of competence of the university and is divided into four phases:

a) Examination of the habilitation application as to the applicant's admissibility and qualification in general: citizenship, reputation, degree in the habilitation subject, etc.

b) Examination of the habilitation paper as well as other scientific papers of the applicant. The habilitation paper must be a scientific treatise on the respective subject. It must be written expressly for the habilitation and must be published.

c) Habilitation colloquium on the habilitation subject before the professors of the respective Faculty.

d) Test lecture before the competent academic authority, in the course of which the didactic qualifications of the applicant are to be examined.

Apart from this basic procedure the standard rules governing the habilitation also include some exceptional stipulations.

The new University Organization Act which is at present being discussed in Parliament contains new stipulations for the habilitation procedure. On principle the Act provides for the continuation of a specific habilitation procedure for acquiring the venia docendi; yet certain changes are envisaged such as:

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(1) Habilitationsnorm (standard rules governing the habilitation), Federal Gazette 232/1955

- The applicant's didactic qualifications are to be examined more thoroughly than until now. The test lecture is to be replaced by a regular course lasting for one semester unless the didactic qualifications can be determined on the basis of the applicant's previous instructional work.
- The composition of the habilitation commission is to be changed. According to the government bill of the Universtiy Organisation Act, the academic intermediary staff and the students will be granted a right to participate in this commission (see section 6).
- The stipulation that the habilitation paper and the dissertation must be two completely different scientific treatises has been changed; under the new Act the habilitation paper may very well be an elaboration of a dissertation.

Present situation and development of habilitations

At present there are about 1,100"Hochschuldozenten" (university teachers with a venia docendi). 400 of them are employed as assistants. A comprehensive statistic on habilitations is in the process of being computed; thus we have no statistics concerning the age and the main fields of professional activities of the "Dozenten." It is impossible to predict how many of them can be considered young scientists in the narrower sense of the word. The "Hochschuldozenten" account for almost 50 percent of teachers who have a venia docendi based on a habilitatio.

Table 1: Teachers with a venia docendi (1)

Full professors	920
Associate professors	157
the new type of associate professors (University Organization Act, sec. 10a)	118
Professors emeriti	91
Honorary professors	123
Hochschuldozenten	1,117
assistants	393
Total (2)	2,408

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(1) These figures do not agree with those of the schemata of authorized posts; here the people have been counted.

(2) Guest lecturers and guest professors have not been included because normally they do not teach regularly and often give single lectures only.

Source: Austrian Central Office of Statistics, deadline: December 1, 1973

Table 2: Number of habilitations at the different Faculties (January 1, 1969 till August 19, 1974)

	1969	197o	1971	1972	1973	1974	Zusammen
Universität Wien							
Katholisch -theologische Fakultät	-	-	-	-	1	1	2
Evangelisch-theologische Fakultät	-	-	-	1	-	-	1
Rechts- und staatswissenschaftliche Fakultät	5	2	7	8	11	4	37
Medizinische Fakultät	16	18	29	2o	22	19	124
Philosophische Fakultät	19	9	12	19	27	1o	96
Zusammen	4o	29	48	48	61	34	26o
Universität Graz							
Theologische Fakultät	1	1	1	4	1	-	8
Rechts- und staatswissenschaftliche Fakultät	1	3	2	-	1	1	8
Medizinische Fakultät	2	7	9	7	13	3	41
Philosophische Fakultät	5	5	7	5	6	4	32
Zusammen	9	16	19	16	21	8	89
Universität Innsbruck							
Theologische Fakultät	1	-	-	1	3	1	6
Rechts- und staatswissenschaftliche Fakultät	2	1	2	1	3	1	1o
Medizinische Fakultät	9	5	12	4	3	5	38
Philosophische Fakultät	5	3	1	5	6	4	24
Fakultät für Bauingenieurwesen und Architektur	-	-	-	-	-	-	1
Zusammen	17	9	15	11	15	11	78
Universität Salzburg							
Theologische Fakultät	1	2	-	-	1	-	4
Rechts- und staatswissenschaftliche Fakultät	2	2	2	1	-	1	8
Philosophische Fakultät	6	5	2	4	5	5	27
Zusammen	9	9	4	5	6	6	39
Technische Hochschule Wien							
Fakultät für Bauingenieurwesen und Architektur	2	1	-	2	2	1	8
Fakultät für Maschinenwesen und Elektrotechnik	1	2	3	4	5	6	21
Fakultät für Naturwissenschaften	9	9	5	12	7	1	43
Zusammen	12	12	8	18	14	8	72
Technische Hochschule Graz							
Fakultät für Bauingenieurwesen und Architektur	1	1	2	3	2	-	9
Fakultät für Maschinenwesen und Elektrotechnik	-	3	-	4	3	2	12
Fakultät für Naturwissenschaften	1	2	3	4	2	2	14
Zusammen	2	6	5	11	7	4	35
Montanistische Hochschule Leoben	1	1	1	-	4	1	8
Hochschule für Bodenkultur Wien	2	3	6	3	2	5	21
Tierärztliche Hochschule Wien	4	3	-	-	1	-	8
Hochschule für Welthandel Wien	1	2	1	2	7	-	13
Hochschule für Sozial- und Wirtschaftswissenschaften Linz							
Sozial-, wirtschafts- und rechtswissenschaftliche Fakultät	1	2	2	2	3	1	11
Technisch-naturwissenschaftliche Fakultät	-	3	-	1	-	-	4
Zusammen	1	5	2	3	3	1	15
Hochschule für Bildungswissenschaften Klagenfurt	-	-	-	-	2	-	2
Insgesamt	58	95	1o9	117	143	78	64o

Between 1969 and August 19, 1974 640 people got their venia docendi at Austrian universities. Over the past three years there has been a marked increase in the number of habilitations.

As concerns the question of young scientists, one must bear in mind that not all those who have a venia docendi are young prospective scientists. In many cases scientists acquire their veniae docendi only at the end of their scientific careers. Detailed statistics on the age distribution in connection with habilitations are not available at present.

In the above mentioned period of time most of the habilitations (82 percent) were effected at the Universities of Vienna, Graz, Innsbruck and Salzburg. Of these, the the University of Vienna ranks at the top with 50 percent of all the habilitations. The two schools of social and economic studies (Linz School of Economics and Social Sciences, Vienna School of Economics) have the smallest share, i.e. only 4 percent of all habilitations.

Statistics concerning the distribution of habilitations according to fields of specialization are not available. It is interesting to note that the Faculties of Medicine have a share of little less than one-third, while the Faculties of Arts and Sciences with a much higher number of chairs have only 28 percent.

It remains to be investigated which study programmes at the various Faculties and universities have enough persons with a venia docendi and which don't. In general the situation seems to be satisfactory although there exists a small gap between supply and demand. Every year about ten "Hochschuldozenten" go abroad, while about 35 scientists from other countries receive positions at various chairs; between ten and twenty of them, however, are Austrian returnees.

Over the past few years the ratio of students to "Hochschuldozenten" has changed to the disadvantage of the students. In 1969/70 there were 22 Austrian regular degree students per "Hochschuldozent", in 1973/74 the ratio was 24 to 1. This ratio, however, does not indicate to what extent the "Dozenten" are actually engaged in teaching, as many of them hardly ever teach. As a rule, the important lectures in the respective study programmes are given by university professors and the scientific personnel; many "Dozenten" who are not Federal employees often give highly specialized lectures; in many cases attendance is not compulsory and the number of students registering for such courses is usually small.

2.10 EXPANSION OF THE UNIVERSITY

2.10.1 Personnel

According to the stipulations of the University Organization Act, BGBl. Nr. 154/1955 the personnel at universities is composed as follows:

a) members of the academic teaching staff
b) other scientific personnel
c) non-scientific personnel

The members of the academic teaching staff at a university are:

a) persons with a venia docendi for a certain scientific subject at the university concerned;
full professors and associate professors, professors emeriti, honorary professors and "Hochschuldozenten";

b) persons entitled to teach a practical subject or a skill at the university concerned: the "Hochschullektoren";

c) persons entitled to teach a scientific subject at another domestic or foreign university: guest professors, guest lecturers;

d) persons without a venia docendi who are in charge of holding certain courses: "Lehrbeauftragte" and "Instruktoren".

Not all the members of the academic staff are university or Federal employees. On the basis of the present legal stipulations the designations "Hochschulprofessor", "Hochschuldozent", and "Hochschullektor" are replaced by "Universitätsprofessor","Universitätsdozent" and "Universitätslektor". The draft of the University Organization Act of 1972 contains the final designations "Universitätsprofessor", Universitätsdozent", etc. What is more important, however, is the extension of the meaning of the term teaching staff. First and foremost, assistants are also being considered members of the teaching staff. This is a recognition of the integration of the university assistants in the teaching process at the universities (see section 2.9.2). Under the present legal provisions the other scientific personnel (b) are composed of university assistants, auxiliary scientific personnel, demonstrators, civil servants and persons without tenure employed in the administrative-scientific field and related fields and "Bundeslehrer" with and without tenure.

The non-scientific personnel consists of civil servants and non-permanent employees of the Federal government.

Survey

According to the 1974 schema of authorized posts, 10,697 posts were provided for the universities. Most of these posts are for university assistants (43 percent) and for the non-scientific personnel (39 percent). 12 percent of all posts are for full professors and associate professors.

A total of 61 percent of the posts are allocated to the category of scientific personnel.

Table 1: The personnel at the universities, 1974 schema of authorized posts

	number	in %
Full professors	1,071	10
Associate professors	9	-
Associate professors according to sec. 10a (University Organization Act)	250	2
University assistants	4,628	43
"Bundeslehrer" and persons with a non-permanent teaching contract	163	2
Civil servants in the administrative-scientific field and non-permanent employees	431	4
Non-scientific personnel	4,145,5	39
Total	10,697.5	100

Table 2: Personnel at the individual universities (1974 schema of authorized posts)

Universities	Full professors	Assoc.prof.	Associate prof. acc. to sec.10a Univ.Organ.Act	Prof. total	Assistants	Non-scientific personnel	Total
University of Vienna	280	1	56	337	1,685	1,295	3,317
Uni of Graz	139	-	30	169	638.5	478	1,285
Univ.of Innsbr.	162	5	35	202	674.5	419	1,295
Univ.of Salzburg	93	-	7	100	233,5	195.5	529
Tech.Univ.Vienna	108	2	37	147	529	516	1,192
Tech.Univ.Graz	73	-	9	82	332,5	361,5	776
Leoben School of Mining and. Met.	31	-	7	38	92	120	250
Vienna School of Agriculture	39	1	8	48	107	177	332
Vienna School of Veterin. Medicine	22	-	2	24	103	306	433
Vienna School of Economics	44	-	1	45	105	88	238
Linz School of Ec.and Soc.Scien.	60	-	1	61	156	157,5	374,5
Klagenfurt School of Educ.Sciences	20	-	-	20	39	32	91
Total	1.071	9	250(3)	1,273	4,628(1)	4,145,5	10,697,5 (

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(1) The table includes 57 associate professors according to sec. 10a of the University Organization Act

(2) Including 132 "Bundeslehrer" with tenure, 31 persons with a non-permanent teaching contract, 292 other civil servants in the administrative-scientific realm as well as 139 non-permanent employees

(3) Including 57 posts that have not yet been allocated to the universities (deadline: September 1, 1974); see footnote 1

7

A few of the posts of university assistans are used for instructors and scientific auxiliary personnel.

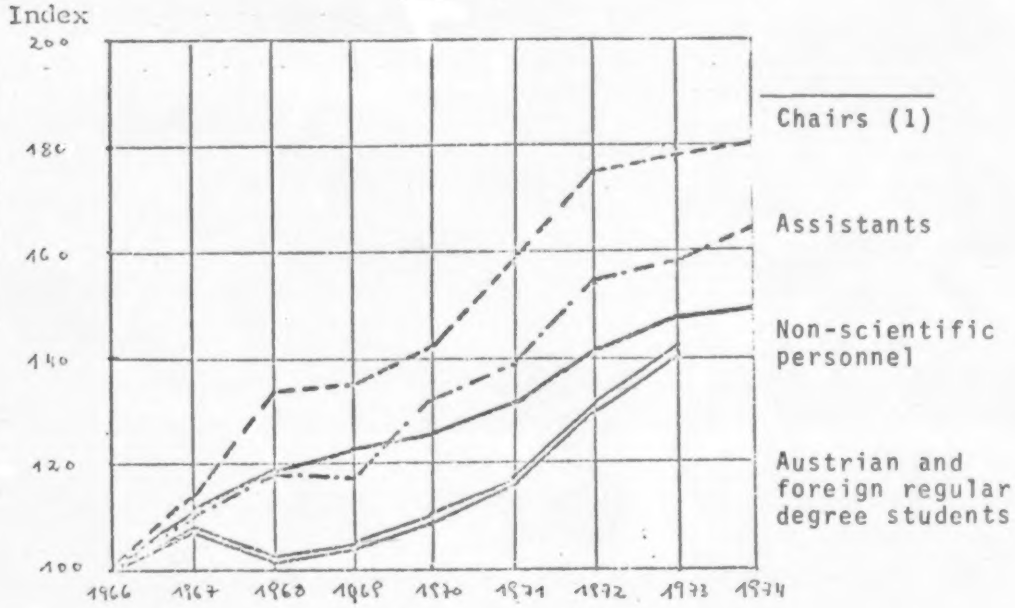
The great number of authorized posts for the "lower ranking" personnel shows the importance of this category for the functioning of the universities.

Some universities have a very large personnel, above all the University of Vienna with more than 3,300 authorized posts. Within the Austrian economy as a whole, the university could thus be equated to a large-scale industrial undertaking.

The personnel of the universities of Graz and Innsbruck and the Technical University of Vienna ranges between 1,200 to 1,300 each. The other universities with the exception of the Klagenfurt School of Educational Sciences employ between 200 and 700 persons each. These figures illustrate the importance of a proper university management. The government bill of the University Organization Act attempts to take these aspects into consideration.

In all the important personnel categories the number of authorized posts was increased considerably during the period under report. The rate of increase of the personnel surpassed by far that of students. The most marked personnel expansion took place between 1970 and 1973.

Graph 1: Authorized posts for the universities 1966 - 1974 (schema of authorized posts) in selected categories



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(1) Without associate professors of the (old and) new type

In addition to the regular university personnel, we also have teachers with non-permanent contracts.

In 1973 more than 800 persons had non-permanent special teaching assignments ("Lehrbeauftragte") at the university; the same holds true of about 700 "Dozenten" who are thus integrated into the university teaching process through special teaching assignments. The "Dozenten" and "Lehrbeauftragte" usually give special courses that enhance the quality of the course offerings; normally student enrolment in such courses is not very high. The greatest number of "Dozenten" are working at the Faculties of Medicine.

If we include the "Dozenten" who are employed as assistants then we have at present about 1,100 "Dozenten" at the universities.

Table 3: Teaching personnel at the universities without authorized posts (as of December 1, 1973)

University	Honorary prof.	"Dozenten"	"Lektoren"	guest prof. guest lecturers,etc	"Lehrbeauftragte"
Univ. of Vienna	34	317	14	100	145
Univ. of Graz	12	118	5	10	121
Univ. of Innsbruck	18	95	-	2	111
Univ. of Salzburg	32	38	-	85	138
Tech.Univ. Vienna	6	66	4	6	61
Tech.Univ. Graz	5	21	-	2	48
Leoben School of Mining and Metallurgy	3	15	-	-	36
Vienna School of Agric.	4	28	5	12	25
Vienna School of Veterinary Medicine	1	6	-	1	2
Vienna School of Economics	-	14	-	7	38
Linz School of Economics and Social Sciences	6	3	-	32	124
Klagenfurt School of Educational Sciences	2	3	-	5	10
Total	123	724	28	262	859

Source: Official statistics

In 1973 4,277 teachers as defined in the University Organization Act were engaged at the universities. Assistants are included in this figure only if they got a special teaching assignment. The figure furthermore includes a number of persons who are not Federal or university employees (guest professors, honorary professors, Lehrbeauftragte, Lektoren, etc.)

In the period under report the number of teachers increased considerably, i.e. by 1,987. The number of "Lehrbeauftragte" rose most markedly: in 1966 they constituted 25 percent of the total academic teaching staff; in 1973/74 the corresponding percentage was 41.

Table 4: Members of the academic teaching staff, 1966 to 1973 (as of December 1 of each year)

	1966		1967		1968		1969		1970		1971		1972		1973	
	No.	in %	No.	in %	No.	in %	No.	in %	No.	in %	No.	in %	No.	in %	No.	in %
Full professors and associate professors	603	26	650	26	693	27	746	26	766	24	839	25	992	24	959	23
Associate profs. acc.to sec.10a Univ.Org.Act	-	-	-	-	-	-	-	-	--	-	-	-	-	-	118	3
Professors emeriti	24	1	19	1	39	2	31	1	65	2	56	2	86	2	91	2
Honorary prof.	46	2	47	2	54	2	75	3	81	3	82	2	106	3	123	3
Hochschul-dozenten	884	39	981	39	968	38	1,049	37	1,009	33	1.100	33	1.172	31	1.117	27
Hochschullektoren	58	3	61	2	44	2	34	1	44	1	33	1	33	1	28	1
Lehrbeauftragte	580	25	658	26	669	26	815	28	1,030	33	1.110	33	1,349	36	1,736	42
Instruktoren	95	4	92	4	78	3	114	4	116	4	124	4	129	3	105	2
Total academic staff	2,290	100	2,508	100	2,545	100	2,864	100	3,111	100	3,344	100	3,757	100	4,277	100

Source: Official statistics

Intermediary staff

The term "intermediary staff" or "academic intermediary staff" is not defined in any law. Yet, if we look at the representation of the "intermediary" group in the tripartite study commissions mentioned in the various special studies acts (for example section 18 of the Federal Act on Technical Study Programmes, BGBl. Nr. 290/1969) we see that this group is composed of assistants, "Hochschuldozenten", "Lehrbeauftragte", civil servants, employees without tenure, non-permanent assistants.

This enumeration shows the lack of homogeneity in this group: it ranges from the part-time demonstrator to the technical director of an enterprise or the head surgeon of a large hospital who have acquired their veniae docendi.

Under the present regulation (University Assistants Act of 1962, BGBl. Nr. 216) the holders of chairs should employ the assistant in such a way that "the assistant can - in connection with and through his work - arrive at scientific achievements;" yet the Act further stipulates that the assistant can do "independent scientific work in his working hours" only if "his immediate superior" considers him qualified for the venia docendi. The assistants reject this provision for two reasons: a) because the decision is left to the discretion of a single person; b) because it does not contain any indication as to the scope and duration of the opportunity to do independent scientific work.

Today the career of an assistant is governed by the University Assistants Act of 1962 and the rules pertaining to the habilitatio contained in the ministerial regulation of 1955 to the University Organization Act.

If an assistant is appointed associate professor or full professor, the provisions of the appointment procedure of the University Organization Act apply. Three important aspects govern the career of an assistant today: University assistants who have the "venia docendi or a similar artistic or practical qualification" and who have already ten years of service countable toward their advancement, can receive tenure after an application to the collegiate body of professors, provided they have "an excellent record of scientific achievement".

If a university assistant does not meet these criteria then he can work 14 years at the university at most. This tenure procedure is much less favourable than tenure procedures in other fields of Federal employment. The refusal to extend a contract after 14 years of Federal service is an unusual social hardship; furthermore, the state loses valuable manpower. Habilitations will be difficult to achieve especially for those assistants who are mainly engaged in teaching (e.g. very time-consuming practicals), in medical services or in a service function of the universities (e.g. technical research institutions). Persons who are excellent teachers doctors or technicians should, therefore, be granted tenure earlier than to date. Obviously one must avoid that the reduction in the number of years necessary for the attainment of tenure and the elimination of the habilitation prerequisite leads to a petrification of the university personnel and consequently reduces the flexibility of the universities.

The new type of associate professor

Several factors have necessitated the introduction of a new type of university teacher, the associate professor according to section 10a of the University Organization Act: the decentralization of the universities expressed in the growing numbers of departments; the fact that chairs held by younger professors pose great obstacles to the careers of young scientists; the discrepancy between independent management of a section of a department and complete subordination under the head of the department; etc.

These persons who are either heads of sections of a department or mainly engaged in teaching have to file an application; they are then appointed by the Federal Ministry of Science and Research upon request of the collegiate body of professors (BGBl. Nr. 276/1972). Space and personnel can be allotted to them; they themselves are subordinate to the head of the department. Prerequisites for the appointment are the venia docendi and at least three years of experience in the field (amendment to the Salary Transfer Act (Gehaltsüberleitungsgesetz) of 1972, BGBl. Nr. 277). This new type of associate professor constitutes a considerable improvement in the advancement possibilities of young scientists.

The present University Organization Act provides for a cooperation between the members of the department; yet the kind and extent of the work to be undertaken depends mainly on the decision of the full professors. Co-determination is thus the main demand of the representatives of the intermediary staff. Obviously, there are many departments where professors and assistants and the "Dozenten" cooperate in the preparation of courses and projects. This cooperation, however, depends on the good will of the head of the department. At the Faculty level such a cooperation was impossible. Hearings and consultations with competent persons (see section 25 (7) of the University Organization Act) have been used only occasionally in the past few years. The first stage in the realization of co-determination was the creation of the study commissions; these commissions were established in 1970 following an initiative of the Parliamentary University Reform Commission.

The University Organization Act of 1972 marked an important step: The assistants became voting members of the decision-making bodies of the Faculty. At present the collegiate body of professors can (but does not have to) establish commissions in which also representatives of the intermediary staff and students participate and vote. Here, the collegiate body of professors has the possibility of actually realizing the "community of students and teachers" through joint discussions and decisions. Still, however, this amendment offers only a transitional solution. The university reform is designed to grant co-determination to the intermediary staff, both in matters directly affecting the members of this group, as well as in general questions pertaining to policies on the departmental, Faculty and university levels (see section 2.7).

Chairs and professors

The 1974 schema of authorized posts includes 1,080 chairs. Betwen 1966 and 1970 the number of posts for professors increased by 183 chairs, between 1970 and 1974 by 174 chairs. This enormous increase is a consequence of the rising number of students and the requirements of the new studies acts.

The increase in the number of posts are distributed over all the universities. Since 1973 a considerable number of posts for the new type of associate professor have been added to the authorized posts for full professors. Such professors were appointed as early as 1972 anticipating the provisions of the 1973 schema. The 1974 schema includes 250 posts for associate professors. As of September 1, 1974 193 were actually filled at the various universities.

Out of the 1,080 chairs in the 1974 schema, 965 were filled as of September 1, 1974.

The University Report 1972 stated that it was possible between 1970 and 1972 to essentially reduce the number of vacancies. As compared with 1972 (deadline: March 31, 1972) it has been possible to further reduce the percentage of vacant chairs (including new ones) from 16 percent to 11 percent.

According to the results of a detailed investigation carried out for the University Report 1972, the average age of the professors is 52 years. In 1969 it was 54 years. Somewhat more than 50 percent of the professors are older than 50. The Faculties of Law and Political Science, the Klagenfurt School of Educational Sciences and the Faculty of Technology and Science of the Linz School of Economics and Social Sciences have a relatively high number of young professors.

The average age of the full professors appointed in 1973 was 42 years.

About 10 percent of professors teaching at the universities do not have a venia docendi; approximately two thirds of them teach at technical universities.

Almost 50 percent of the professors were appointed at the Faculties where they had acquired their venia docendi; for 21 percent it was the first appointment to a chair after their habilitation. 26 percent returned to the Faculty at which they had acquired their venia docendi after having held positions at other Faculties (at home and abroad).

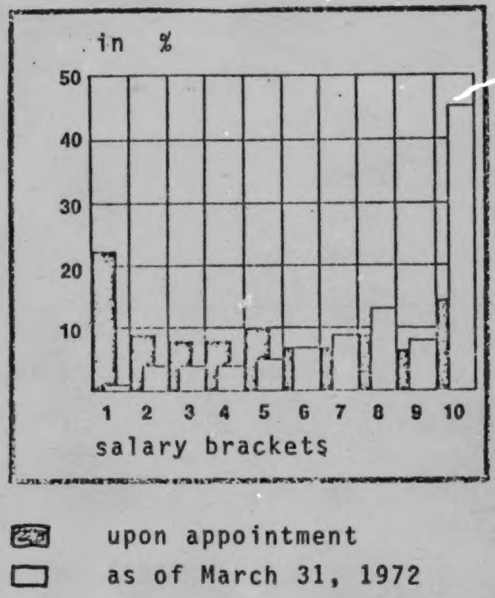
About one fifth of the professors received their venia docendi prior to their 31st year of age; somewhat more than 50 percent got their habilitation before the age of 35. The average age of professors with a venia docendi is lowest at the Faculties of law, followed by the Faculties of arts and sciences. Members of the School of Medicine and the Technical Universities usually receive their venia docendi later than professors in other subjects.

5 percent of the professors were appointed university professors in the very year in which they received their venia docende. About 25 percent got their appointment after one year at most; 50 percent within a period of 5 years. In the case of 25 percent of the professors more than 10 years elapsed between their habilitation and their first appointment to a chair at an Austrian university.

For about 50 percent of the full professors with a chairmanship (deadline 1972) the appointment to this chair was their first appointment; for 355 professors or 43 percent it was already the second appointment.

A relatively small number of professors are in the lower salary brackets. 45 percent of the full professors are in the salary bracket 10, i.e. they receive the highest salary possible. 27 percent receive a seniority pay in addition to their salary (bracket 10). In toto two thirds of the professors are in the top three salary brackets, i.e. brackets 8, 9 and 10.

Graph 2: Salaray brackets of full professors upon appointment and as of March 31, 1972



Appointment and appointment procedure

After the announcement of the schema of authorized posts - an annex to the Federal Finance Act - in the Federal Gazette the Federal Minister of Science and Research designates the new chairs in accordance with sec. 58, subsec. 2 of the University Organization Act; then the respective universities are notified of the allocation of these new chairs. The collegiate bodies of professors at the universities have the right to submit proposals to the Federal Minister of Science and Research with regard to filling the posts of full and associate professors. Since 1972 it has been obligatory to advertise posts for members of the teaching staff, other scientific personnel as well as for all other posts which require the completion of university studies.

As concerns the chairs that were already filled, the universities will have to employ the new procedure when a vacancy occurs. As a rule, the collegiate bodies of professors establish appointment commissions which in turn nominate suitable persons for the post. After the proposals have been discussed they are submittted to the collegiate bodies of professors for decision and to the Federal Minister of Science and Research. The Federal Minister of Science and Research selects the person from among the three suggested candidates. Then the Ministry negotiates with the new professor about his personal ideas and wishes concerning personnel and material. After agreement is reached on the conditions under which the candidate is prepared to accept the appointment, copies of the letter of appointment are forwarded to the Federal Ministry of Finance and to the Federal Chancellor's Office. In the monthly meetings of the representatives of the Federal Ministry of Science and Research, the Federal Chancellor's Office and the Federal Ministry of Finance agreement is reached with the Federal Ministry of Finance (a customary procedure not required by law) and the Federal Chancellor's Office (on the basis of the Federal Act on the cooperation of the Federal Chancellor's Office in the filling of Federal posts, BGBl. Nr. 82/1963). as to the envisaged salary bracket.

After agreement is reached the successful candidate is notified in writing by the Federal Ministry of Science and Research; he is requested to give his definite answer as to whether or not he will accept the appointment. Upon receipt of the candidate's acceptance, the appointment file is submitted to the Council of Ministers for decision. If the Council of Ministers approves the appointment, the file is submitted to the Federal President. He appoints the candidate university professor.

If the negotiations with the first candidate are not successful, new ones are started with one of the remaining two candidates. If the negotiations with all three candidates are unsuccessful, the Federal Ministry of Science and Research requests the collegiate body concerned to submit new suggestions.

Table 5: Number of appointments per year since 1969

1969	65
1970	72
1971	149
1972	94
1973	115
1974	42

(Deadline: September 1 of each year)

In 1973, 115 chairs were filled. As compared with 1969 this signifies an increase in the number of appointments by 50.

University assistants

For 1974, 4,628 posts for assistants were envisaged. The number of assistants was raised by about 1,000 between 1966 and 1970, and by another 1,000 between 1971 and 1974. Thus, in the period under report (1966-1974) the number of posts was raised by 2,000, i.e. an increase of 80 percent.

The universities and the technical universities account for the largest number of assistantships. At the various universities at least 50 percent of the assistantships go to the Faculties of medicine; at the University of Vienna the percentage is even higher, i.e. 60 percent.

Although the number of assistantships rose considerably in the period under report and the situation at the individual universities was improved, a big problem has not yet been solved. Many assistants are in charge of administrative work, library work, telephones, secretarial work, the training of specialists at the university hospitals, the training of dentists, etc.; these activities keep them away from their actual activities. The result is a certain distortion of the student/assistant and professor/assistant ratios. A job evaluation of the assistantships would give a clearer picture of the actual activities of the assistants. In this context the number and use of the administrative personnel at the universities and at the departments should be considered. Again, a job evaluation would yield valuable results. A more rational use of this personnel would be urgently required. Mention must be made of another problem: Particularly the natural-science and foreign language departments must have secretaries who know at least English or the respective language of the department, as correspondence is conducted in the foreign language. As a rule, secretaries are ranked in the salary bracket (d), at most, however, in bracket (c). Thus, it is not possible to employ secondary-school graduates. Experience shows that the above departments rarely get secretaries with higher qualifications.

Table 4: Number of posts for university assistants at the individual universities 1966 - 1974

	1966	1967	1968	1969	1970	1971	1972	1973	1974
University of Vienna	979	1,105	1,247.5	1,288	1,352	1,456.5	1,615	1,643.5	1,685
Univ. of Graz	308	358.5	441	459	481	533.5	598	600	638.5
Univ. of Innsbr.	344	388	467	487	524	580.5	659.5	647.5	647.5
Univ. of Salzb.	50	90	132	143	158	183.5	211.5	224	233.5
Techn. Univ. of Vienna	344	376.5	412	416	430.5	469.5	509.5	518.5	529
Techn. Univ. of Graz	201.5	233	271	273	279.5	307.5	320.5	328.5	332.5
Leoben School of Mining and Metall.	69.5	74	79	79	82	84	90	89	92
Vienna School of Agriculture	67	79	95	95	98	102	110	106	107
Vienna School of Vet. Medicine	61	68	78	78	79	90	101	101	103
Vienna School of Economics	57	64	71	75	78	86	93	99	105
Linz School of Econ.and Soc.Scien.	23	48	60	66	85	116	136	146	156
Klagenfurt School of Educ.Scienc.	-	-	-	-	-	27	30	34	39
Reserved posts	55	76	56,5	7	7	44	10	25	20
Total	2,569	2,960	3,410	3,466	3,653	4,084	4,484	4,562(1)	4,628(1)

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(1) In the sum total without reserved posts for professors according to sec. 10a

Table 7: Assistant/professor ratios: by universities and Faculties, 1974 schema of authorized posts

University/Faculty	assistants per professor
University of Vienna	6.0
Catholic Theology	1.5
Protestant Theology	1.1
Law and political science	2.7
Medicine	16.6
Arts and Sciences	3.4
University of Graz	4.6
Theology	1.1
Law and political science	2.1
Medicine	12.8
Arts and Sciences	3.2
University of Innsbruck	4.0
Theology	1.3
Law and political science	2.2
Medicine	9.3
Arts and Sciences	3.0
Civil engineering and architecture	3.1
University of Salzburg	2.5
Theology	1.4
Law and political science	2.7
Arts and Sciences	2.7
Technical University of Vienna	4.8
Civil engineering and architecture	3.5
Mechanical and electrical engineering	4.8
Sciences	5.9
Technical University of Graz	4.6
Civil engineering and architecture	4.1
Mechanical and electrical engineering	4.5
Sciences	5.3
Leoben School of Mining and Metallurgy	3.0
Vienna School of Agriculture	2.7
Vienna School of Veterinary Medicine	4.7
Vienna School of Economics	2.4
Linz School of Economics and Social Sciences	2.6
Social Sciences, Economics and Law	2.6
Technology and Science	2.7
Klagenfurt School of Educational Sciences	2.0
Total (1)	4.3

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(1) including 10 reserved posts

At present there are approximately 4.3 assistants per chairholder, though considerable differences exist between the Faculties. Chairholders at the Faculties of Medicine have the greatest number of assistants.

Chairholders of the same Faculties at different universities usually do not have the same number of assistants.

"Bundeslehrer" and scientific personnel at universities

Between 1969 and 1974 the number of posts for "Bundeslehrer" and persons with non-permanent teaching contracts ("Vertragslehrer") was increased by 85. "Bundeslehrer" and "Vertragslehrer" are active mainly at the departments of physical education and translation/interpreting as well as in the various language departments. The scientific personnel was expanded by 219 posts between 1969 and 1974.

The 1974 schema of authorized posts envisaged 292 posts for scientific personnel of category A and 139 for non-permanent personnel of category I/a. Not all of these posts are envisaged for the universities; some are provided,for example, for the Austrian Academy of Sciences.

Table 8: "Bundeslehrer" and scientific personnel, schemata of authorized posts

		1969	1972	1974
"Bundeslehrer" and "Vertragslehrer"	number	78	129	163
	index	100	165	209
civil servants and non-permanent employees in the administrative-scientific field	number	212	319	431
	index	100	150	203

"Lehrbeauftragte"

"Lehrbeauftragte" play an important role in tertiary education. According to sec. 9, subsec.1, lit. d of the University Organization Act of 1955, they belong like the "instructors" to the academic teaching staff; they are "persons without a venia docendi who are entrusted with teaching certain courses".

According to sec. 16 of the University Organization Act of 1955 "scholars and other experts who do not belong to the teaching staff of the university under sec. 10-15 of this Federal Act .... may, in the case of an urgent need, be entrusted by the collegiate body of professors (by the competent academic authority) with teaching certain scientific courses for a definite or indefinite period of time; likewise they may be entrusted with delivering individual lectures".

Special teaching assignments thus help to guarantee and complete the course offerings in all those cases where the available scientific personnel would be unable to do so. In accordance with sec. 18 of the University Organization Act, members of the academic teaching staff as well may be given special teaching assignments.

The number of persons with special teaching assignments is rapidly rising. It has more than doubled in the past five years. At present, there are more than 1,700 persons with special teaching assignments (see Table 4). Their average teaching assignment is slightly above two hours per week.

About 50 percent of the persons with special teaching assignments are Federal employees, i.e., most of them are university assistants, with and without a venia docendi.

Thus the assistants are even further integrated in the teaching process.

As concerns special teaching assignments for persons not employed at the universities the practise differs between the individual institutions. At the Universities of Vienna and Salzburg and at the Vienna School of Veterinary Medicine most of the special teaching assignments are given to persons employed at the university.

Non-scientific personnel

Non-scientific personnel at universities has to fulfill an auxiliary function in teaching and research, above all in the practical field and in the administration.

The 1974 schema of authorized posts provides for 4,145 posts for non-scientific personnel at the universities. The number of posts increased by 1,620 between 1966 and 1974. Between 1970 and 1974 the number of posts went up by a total of 840. All universities benefit from this increase.

The non-scientific personnel works mainly at the departments and university hospitals and in the general administration. In 1974 about 2,800 posts were made available to the 769 departments and university hospitals, i.e., about two thirds of all the posts for non-scientific personnel.

Table 9: Development in the numbers of non-scientific personnel, 1966-1974

Hochschule	1966	1967	1968	1969	1970	1971	1972	1973	1974
Universität Wien	838⅓	892⅓	959⅚	960⅓	1052½	1113½	1210	1232½	1295
Universität Graz	306	329	335	337	384	409½	457	464½	478
Universität Innsbruck	247	287	297	296½	335	343	385	396	419
Universität Salzburg	53	87	105½	115½	143½	158½	181	185	195½
Technische Hochschule Wien	319	333½	346	339	376½	403½	465	479	516
Technische Hochschule Graz	238	251	270½	268	297	316½	343	349	361½
Montanistische Hochschule Leoben	74	82	85	82	98	102	112	114	120
Hochschule für Bodenkultur	137⅔	145⅔	156⅔	154⅙	159½	163½	171	172	177
Tierärztliche Hochschule	229	241	256	252	270	283	296	298	306
Hochschule für Welthandel	59	66	66	62	71½	73½	79	81	88
Hochschule für Sozial-u.Wirtschaftswiss., Linz	24	70	97	97	116	135	155	156	157½
Hochschule für Bildungswissenschaften Klagenfurt	-	-	-	-	-	10	23	26	32
insgesamt	2525	2784½	2974½	2964	3303½	3511½	3877	3953	4145½

As concerns department employees, the lower positions predominate. 27 percent of them are employees of category B, i.e., their educational level corresponds to that of secondary-school graduates.

Student/professor and student/assistant ratios

The student/professor, student/assistant and assistant/professor ratios can be used as guidelines. It is clear that those figures alone cannot describe the situation at the departments of Faculties; the situation can be evaluated only by taking into consideration the various tasks and burdens resting upon the departments. Those ratios are, however, valuable indicators of the general personnel situation at universities and allow comparisons over a longer period of time.

In the winter semester 1973/74 (using the 1973 schema of authorized posts) we had 1,224 (1) professors and 4,562 assistants for 66,850 regular degree students (Austrians and foreigners). Thus the professor/student ratio was 1 : 55 and the assistant/student ratio 1 : 15. If the numbers of professors and assistants - they constitute the scientific personnel that is mainly responsible for the students - are added together, the ratio is 12 students per professor or assistant.

On the average there is one post of the non-scientific personnel per 17 regular students.

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(1) Including the new type of associate professor

Table 10: Student/personnel ratios (schemata of authorized posts)

Proportion of the number of regular Austrian and foreign degree students to ....

	professors (full and associate professors, including the new type of associate professors)	assistants	professors and assistants	non-scientific personnel
1966	65.3	18.4	14.3	18.7
1967	64.0	17.2	13.6	18.3
1968	55.9	14.0	11.2	16.1
1969	55.4	14.1	11.3	16.5
1970	56.6	14.0	11.3	15.5
1971	57.8	13.4	10.9	15.6
1972	60.1	13.6	11.1	15.8
1973	55.5	14.7	11.6	16.9

In the period under report the ratios were considerably improved. During the great expansion in the number of students over the past few years it was also possible to maintain the good ratios.

Table 11: Student/professor/assistant/non-scientific personnel ratios (1973 schema of authorized posts)

Universities/Faculties	student/ professor (full, associate professors and prof. acc.to sec.10a)	student/ assistant	student/ professor and assistant	student/ non-scientific personnel
University of Vienna	72.9	14.1	11.8	18.8
Catholic Theology	25.2	18.9	10.8	
Protestant Theology	9.7	8.5	4.5	
Law and political science	87.1	33.9	24.4	
Medicine	56.1	4.7	4.4	
Arts and Sciences	83.7	27.4	20.7	
University of Graz	55.1	14.8	11.6	19.1
Theology	12.5	11.8	6.1	
Law and political science	53.6	25.0	17.0	
Medicine	64.6	6.7	6.1	
Arts and Sciences	59.2	24.2	17.2	
University of Innsbruck	45.8	13.7	10.5	22.3
Theology	32.6	26.1	14.5	
Law and political science	56.6	29.9	19.6	
Medicine	44.2	6.6	5.7	
Arts and Sciences	49.3	19.6	14.0	
Civil engineering and architecture	32.5	12.6	9.1	
University of Salzburg	45.5	19.5	13.7	23.6
Theology	24.3	17.9	10.3	
Law and political science	18.7	7.5	5.4	
Arts and Sciences	62.7	25.1	17.9	
Technical University of Vienna	49.8	13.0	10.3	14.0
Civil engineering and architecture	49.5	15.5	11.8	
Mechanical and electrical engineering	61.5	14.7	11.9	
Sciences	42.1	10.4	8.3	
Technical University of Graz	51.7	12.3	9.9	11.5
Civil engineering and architecture	56.0	15.6	12.2	
Mechanical and electrical engineering	63.9	14.4	11.8	
Sciences	30.5	6.5	5.3	
Leoben School of Mining and Metallurgy	19.1	7.9	5.6	6.2
Vienna School of Agriculture	26.5	11.7	8.1	7.2
Vienna School of Veterinary Medicine	28.6	6.8	5.5	2.3
Vienna School of Economics	130.9	54.2	38.3	66.3
Linz School of Economics and Social Sciences	44.1	17.8	12.7	16.7
Faculty of Social Sciences, Economics and Law	53.5	21.4	15.3	
Faculty of Technology and Science	26.9	11.1	7.8	
Klagenfurt School of Educational Sciences	15.9	7.0	4.9	9.2
Total	55.5	14.7	11.6	16.9

The ratios differ considerably between the individual universities or between the same Faculties of different universities. The same holds true for the non-scientific personnel.

2.10.2 Available space

Present situation

During the past few years loans for the construction of new university premises expanded considerably. This boom in construction activities resulted in part from the so called "university milliard", which renders possible the realisation of large building projects. The expansion of available space can not be equated to the increase in funds available, as construction costs went up considerably in the period under report.

Since 1970 some Sch. 300 million have been spent on the maintenance and improvement of existing premises.

The funds for new constructions in the university budget were raised by 53 percent from 1966 to 1969 and by 159 percent from 1969 to 1974.

In 1969 the first investigation was carried out into the actual useful area at the disposal of the Austrian universities. In 1969 the universities had an area of 392,899 m^2. Since 1971 alone the increase in useful area has amounted to 69,900 m^2.

The amount of available space has furthermore been increased by renting premises.

Table 13: Actual useful area available from 1969 to 1974

	Federal property (1)	Rented premises	Total
1969	392,899	18,800	411,699
1971	448,946	28,800	477,746
1974	518,846	33,200	552,046

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(1) Including the School of Economics (Owners: "Verein der Freunde der Hochschule für Welthandel") as this is a permanent endowment.

Table 12: Credits for new constructions (development of construction costs)

Balance of accounts	1966	Sch. 95.6 Million,	i.e. 79,700 m3	(Sch. 1,200.-/m3)
Balance of accounts	1967	Sch. 94.4 Million,	i.e. 79,700 m3	(Sch. 1,200.-/m3)
Balance of accounts	1968	Sch.135.0 Million,	i.e. 96,400 m3	(Sch. 1,400.-/m3)
Balance of accounts	1969	Sch.146.4 Million,	i.e. 96,400 m3	(Sch. 1,400.-/m3)
Balance of accounts	1970	Sch.204.4 Million,	i.e.113,600 m3	(Sch. 1,800.-/m3)
Balance of accounts	1971	Sch.210.6 Million,	i.e.113,600 m3	(Sch. 1,800.-/m3)
Balance of accounts	1972	Sch.289.5 Million,	i.e.131,600 m3	(Sch. 2,200.-/m3)
Balance of accounts	1973	Sch.331.9 Million,	i.e.138,300 m3	(Sch. 2,400.-/m3)
Federal Budget estimate and Budget Overdraft Act	1974	Sch.380.0 Million,	i.e.138,300 m3	(Sch. 2,400.-/m3)

Premises are rented only in cases of emergency and only for a limited period of time provided the investment costs are not exorbitant.

Including rented premises the Austrian universities had some 550,000 m2 of useful area at their disposal in the autumn of 1974, i.e., an average figure of 7.9 m2 per student.

The increase in the actual useful area since 1971 is distributed among the various fields of study as follows:

Table 14: Increase in space from 1971 to 1974 by fields of study

Humanities:	21,600 m2	actual useful area
Natural sciences:	12,900 m2	- " -
Technology: (including the School of Mining and Metallurgy and the School of Agriculture)	27,200 m2	- " -
Law-, and Social- and Economic Sciences: (including the Vienna School of Economics)	4,400 m2	- " -
Medicine:	3,800 m2	- " -
Total	69,900 m2	actual useful area

Table 15: Actual useful area in 1974 by universities

	Federal property (1)	Rented premises	total	m2/student
University of Vienna	151,159	7,600	158,759	6.6
University of Graz	48,795	4,430	53,225	5.9
University of Innsbruck	66,574	5,100	71,674	7.8
University of Salzburg	36,856	6,550	43,406	9.0
Technical University of Vienna	85,156	2,200	87,356	12.7
Technical University of Graz	44,634	5,800	50,434	12.4
Leoben School of Mining and Metallurgy	22,128	200	22,328	29.7
School of Agriculture	19,947	350	20,297	14.9
School of Veterinary Medicine	12,471	-	12,471	18.0
School of Economics	12,045	1,180	13,225	2.3
Linz School of Economics and Social Sciences	15,598	-	15,598	5.9
Klagenfurt School of Educational Sciences	3,483	350	3,833	15.0
Total	518,846	33,760	552,606	7.9

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(1) Owing to the permanent endowment: including the building owned by the "Verein der Freunde der Hochschule für Welthandel".

Table 16: Actual amount of and increase in actual useful area (m2) since 1969 by universities

Universities and faculties	Actual amount 1969	Increase 1969-1971	Actual amount 1971	Increase 1971-1974	Actual amount 1974
University of Vienna	126,709	2,150	128,859	22,300	151,159
Faculty of Theology	1,036	--	1,036	1,700	1,960
Faculty of Law	4,678	--	4,678	--	4,678
Faculty of Medicine	28,148	750	28,898	3,800	32,698
Faculty of Arts and Sciences	57,544	1,400	58,944	16,500	76,224
Miscellaneous space	35,303	--	35,303	--	35,303
University of Graz	47,349	1,446	48,795	--	48,795
Faculty of Theology	586	--	586	--	586
Faculty of Law	2,301	702	3,003	--	3,003
Faculty of Medicine	10,004	--	10,004	--	10,004
Faculty of Arts and Sciences	23,531	--	23,531	--	23,531
Miscellaneous space	10,927	744	11,671	--	11,671
University of Innsbruck	42,716	23,858	66,574	--	66,574
Faculty of Theology	1,075	--	1,075	--	1,075
Faculty of Law	2,103	--	2,103	--	2,103
Faculty of Medicine	7,815	200	8,015	--	8,015
Faculty of Arts and Sciences	17,911	1,147	19,058	--	19,058
Miscellaneous space	13,812	4,786	18,598	--	18,598
Faculty of Civil Engineering and Architecture	--	17,725	17,725	--	17,725
University of Salzburg	13,309	7,547	20,856	16,000	36,856
Faculty of Theology	991	--	991	600	1,591
Faculty of Law	2,135	--	2,135	1,800	3,935
Faculty of Medicine	--	--	--	--	--
Faculty of Arts and Sciences	4,907	7,104	12,011	12,300	24,311
Miscellaneous space	5,276	443	5,719	1,900	7,619
Technical University of Vienna	59,332	12,824	72,156	13,000	85,156
Technical University of Graz	34,669	165	34,834	9,800	44,634
Leoben School of Mining and Metallurgy	22,128	--	22,128	--	22,128
School of Agriculture	15,547	--	15,547	4,400	19,947
School of Veterinary Medicine	12,471	--	12,471	--	12,471
Vienna School of Economics	7,645	--	7,645	4,400	12,045
Linz School of Economics and Social Sciences	11,024	4,574	15,598	--	15,598
Faculty of Technology and Natural Sciences	--	2,740	2,740	--	2,740
Faculty of Social and Economic Sciences and Law, miscellaneous space	11,024	1,834	12,858	--	12,858
Klagenfurt School of Educational Sciences	--	3,483	3,483	--	3,463
Total	392,899	56,047	448,946	69,900	518,846

University of Graz

		Actual amount of useful area (AAUA) 1976
Faculty of Medicine: pre-clinical departments	14,000 m2 AAUA	24,004 m2
Faculty of Arts and Sciences: new building instead of "Old Chemistry" building	3,700 m2 AAUA	27,231 m2
Sports facilities	mainly athletic grounds	

The three above mentioned projects require funds amounting to some Sch. 450 million.

University of Innsbruck

		Actual amount of useful area (AAUA) 1976
Faculty of Medicine: pre-clinical departments	10,500 m2 AAUA	18,515 m2
Faculty of Arts and Sciences: Sports centre	halls and athletic grounds	

The two projects require funds amounting to some Sch. 180 million.

Technical University of Graz

		Actual amount of useful area (AAUA) 1976
Departments of Mechanical Engineering	8,900 m2 AAUA	58,834
Departments of Physics	5,300 m2 AAUA	

The two projects require funds amounting to some Sch. 400 million.

The lack of space at the Vienna School of Economics and the difficulties encountered in extending university premises in the immediate neighbourhood have given rise to reflections as to how and where a large new building should be constructed. A site was found that is situated quite favourably both as regards Vienna School of Economics and other academic institutions (University of Vienna): The Franz-Josefs-freight-yard. By building a superstructure over the existing track system an enormous area can be created. Part of the site, i.e., some 30,000 m2, has been designated for the School of Economics.

At the same time it will be possible to meet the requirements i.e., an actual useful area of some 9,000 m2, of the Department of Zoology of the University of Vienna. Some space remains "in reserve" at this new "university centre Althanstraße" for the construction of further university buildings, e.g. for biology, in particular for phytotomy and genetics. The costs for the new buildings for the School of Economics and the Department of Zoology are estimated at more than Sch. 2,000 million.

Apart from the above mentioned projects there are further large-scale projects under construction in the region of Vienna: new buildings for departments of the Technical University of Vienna on the "Freihausgründe", the new building for the Faculty of Law and Political Science of the University of Vienna as well as the first section of the construction work on the area of the "Allgemeines Krankenhaus" (Vienna's main hospital) - (Departments of Chemistry and Pharmacy).

The new buildings for the departments of mathematics and physics of the Technical University of Vienna will be constructed on the "Freihausgründe". These buildings are also to house various central facilities of the universities (student cafeterias and dining halls, premises for the Austrian Student's Union, rooms for student activities).

The additional area available upon completion of the new buildings will amount to some 25,000 m2.

A new approach has been employed for the Faculty of Law and Political Science of the University of Vienna. Reading and working places will be arranged around a library core on each floor, separated according to the various sections or specific fields of study, to give students immediate access to "the book". The new building is designed for a total of some 4,000 students and will house all the departments of law. The building is under construction and will offer some 15,000 m2 of actual useful area upon its completion.

As new hospital buildings are under construction at a different site, the area of the "Allgemeines Krankenhaus" as well as the former sports grounds of the University have been envisaged for the extension of the Faculty of Arts and Sciences and the Faculty of Medicine of the Universit of Vienna. The general plan for this area exists already and the detailed blueprints for the first and second building sections are in preparation. The first two building sections shall provide the urgently needed space for the Departments of Chemistry, the Department of Pharmacy and some pre-clinica Departments of the Faculty of Medicine. Detailed plans have not been completed so far; thus no exact data can be given on the extent of the useful area to be created. It is certain however, that the two building sections in question will produce a useful area of about 50,000 m2.

A further building for the Faculty of Technology and Natural Sciences is being added to the new buildings of the Linz School of Economics and Social Sciences. Apart from the Departments of Chemistry and Physics, this building is to temporarily house some other departments of this Faculty, which do not need laboratories. The actual useful area of this building amounts to some 9,000 m2.

Construction work on new buildings for the Faculty of Arts and Sciences (with the exception of the Departments of Mathematics, Physics and Astronomy) will soon be started on the area of the old University-Sports-Grounds in Innsbruck. Upon completion of these buildings, the University will dispose of some 20,000 to 25,000 m2 of actual useful area. New buildings are also planned for the Departments of Mathematics, Physics and Astronomy next to the buildings of the Faculty of Civil Engineering and Architecture; construction work is to be started within the near future.

As the submission of competitive building projects for the new premises of the Faculty of Arts and Sciences of the University of Salzburg has been terminated, planning activities may proceed here, as well.

As it is extremely difficult to fit the projected buildings into the surrounding landscape, planning will probably take a fairly long time. The project will be realized in several stages. The scope of the individual building sections is still unknown.

A new building is under construction in the centre of the city, which comprises an actual useful area of some 12,000 m2, and is to replace the former "Altes Borromäum". Initially it will have to house departments of both the University and the Academy of Music. Building operations are extremely difficult, as under the Act on the Preservation of Ancient Buildings the facade of the "Altes Borromäum" must be preserved and included in the new facade and the external design of the building must fit into the old City of Salzburg.

Suitable building sites in Vienna

In 1971 the Austrian Institute for Town and Country Planning (Institut für Raumplanung) was instructed by the Federal Ministry of Science and Research to conduct a survey of further possible sites for university buildings for all institutions of higher learning in the area of Vienna. The primary aim of this survey was to collect data and to show ways of determining and meeting future requirements of space both with respect to quantity and quality, i.e., how to choose sites or combinations of sites. At the same time a catalogue of possible sites for university buildings was to be compiled for the area of Vienna. Other tasks of this survey were to establish criteria for the assessment of possibilities, to show basic requirements for the use of envisaged sites and to indicate any additional measures which might prove necessary. Upon termination of the survey the Austrian Institute for Town and Country Planning will have to concentrate its endeavours - in permanent cooperation with the decision-making and other pertinent bodies - on pointing out the optimal site(s) or the optimal combination(s) of sites from among the available sites.

The survey "Basic data on suitable sites for university buildings in Vienna" ("Grundlagen zur Standortfrage der Wiener Hochschulen") was completed in 1973, and the results obtained were submitted to the competent authorities and to the universities. The survey of the Austrian Institute of Town and Country Planning is still under discussion; the individual authorities concerned have not yet made any final decision on the future site(s) or combination(s) of sites for university buildings. This is not surprising as the establishment of an important institution such as a university, is bound to affect many important functional areas of the town. It changes the image of individual parts of the town and essentially affects the growth of the town and its surroundings. A decision can thus only be made after a thorough investigation and discussion of all the complex problems involved.

As to the contents of the survey it must be pointed out that planning procedures are extremely difficult in view of uncertain forecasts. The values given correspond to future developments assessed on the basis of the present state of information and planning. These developments, however, depend on circumstances for which long-term forecasts cannot be made and which cannot be influenced. Such influences are, e.g., the general state of the economy and its impact on the demand for university graduates, changes in the organization and methods used in the fields of education, or the conditions prevailing in the home countries of foreign students. Any forecasts as to future requirements are, thus, based on assumptions. The higher the number of assumptions and the further they reach into the future, the lower their degree of certainty.

Yet we need long-term planning; decisions must be made today which should be "correct" also in the long run. The only way out of this dilemma is an adjustable, flexible plan with a lot of leeway for planning.

The result of the Institute's investigations can be summarized as follows:

- the extension scheme must allow for the best possible use of all the existing university sites and facilities;
- the extension scheme must ensure a maximum degree of flexibility;
- the tendency towards a scattering of university sites must be counteracted;
- the most favourable extension scheme for Vienna is a "university axis" comprising at least one area with a concentration of university buildings and if possible several supplementary areas;
- said area with a concentration of university facilities should be further developed as a "multi-faculty" site;

- A "university axis" should best be developed along an underground line connecting the several sites of university facilities with each other and with the city; optimal connections with the surroundings of the town should be guaranteed as well.

For the investigation of possible sites three conditions were considered decisive:

- short term availability;
- access to public transport;
- satisfactory size of the area.

A total of 29 areas, i.e., 12 sites suitable for a concentration of buildings and 17 supplementary sites met all three conditions.

Six areas can be integrated into an "axis system"; one of these areas permits developments along two different axes. Seven possible schemes of development should be taken into consideration when working out a general plan for the location of university buildings; a university axis comprising at least one area with a concentration of facilities and, if possible, several supplementary areas, is most favourable for Vienna.

Considering all the above mentioned criteria, the Austrian Institute for Town and Country Planning has eventually come to the conclusion that five of the seven possible development schemes must be thoroughly checked before making a final decision.

The actual decision making process has not yet been completed; it has, however, become obvious that only two of the remaining five possible sites for future university buildings come into question, namely a site in the south and a site in the north each of Vienna.

2.10.3 Scientific libraries

About 50 large and medium-sized scientific libraries as well as a great number of smaller library facilities with a total of more than 18 million volumes are administered by the Federal and Provincial governments. Among the most important are the Austrian National Library, the libraries of the institutions of higher learning and the "Study Library Linz", all of which are administered by the Federal Ministry of Science and Research.

The steadily increasing production of literature, the rising number of students and scientifically active persons and the need for faster access to information, raises the demands on the libraries, which can be met only by a closer cooperation among libraries, particularly in the realm of higher education

This cooperation is effected, above all, through coordination (mutual arrangements concerning extension and development of libraries, mutual information on library holdings as well as provisions for improved library use) at the individual institutions of higher learning. This is a preliminary step toward an integrated library system (uniform and joint library administration), which is to replace the present uncoordinated system of parallel libraries at institutions of higher learning and departments. (1)

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(1) Compare Deutsche Forschungsgemeinschaft: Empfehlungen für die Zusammenarbeit zwischen Hochschulbibliotheken und Institutsbibliotheken, Bonn 1970; Österreichisches Institut für Bibliotheksforschung, Dokumentations- und Informationswesen, Untersuchung der Bibliotheksstruktur an Deutschen Hochschulen, Vienna 1972;
Vom Strukturwandel deutscher Hochschulbibliotheken. Ed. W. Haenisch and Cl. Köttelwesch, Frankfurt/M. 1973 (ZfBuB. SH 14);
Bibliotheksplan 1973. Berlin 1973;
Arbeitsgruppe Bibliotheksplan Baden-Württemberg. Gesamtplan für das wissenschaftliche Bibliothekswesen. Vol.1. 2nd ed. Pullach near Munich, 1973;
Boberg, Gisela and Kirsten Ebeling: Organisationsreform der Hochschulbibliothek. A bibliography. Pullach near Munich, 1974.

One of the aims of the University Organization Act of 1955 was to oblige the directors of the libraries of institutions of higher learning to reach agreements with the heads of the teaching and research institutions on the acquisition of literature; furthermore, they were to be entrusted with the responsibility of cataloguing and making available the entire scientific university literature. The library directors were placed directly under the Federal Ministry of Education (now, the Federal Ministry of Science and Research); the aim was to "make possible an acquisition policy that is independent of a changing will of the majority and particular interests and is oriented toward a systematic extension of holdings and a completion of the collections in various fields". (1)

As the library directors are not directly responsible to the institutions of higher learning, they were not able in all cases to sufficiently comply with their legal responsibilities for the entire library system in the realm of higher education.

On the one hand, it was difficult to coordinate the acquisition policy, as it was often not possible to establish the necessary contacts with the competent academic authorities and heads of the teaching and research institutions. On the other hand, problems arose with respect to central cataloguization and library administration, as many departments had no expert library personnel; in those cases where such personnel was available it was placed not under the library director but under the head of the respective teaching and research institution. In some cases this led not only to an estrangement between the libraries of institutions of higher learning and other teaching and research institutions, but also to a misplacement of manpower.

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(1) Compare Otruba, Ludwig; Aspekte der Hochschulreform. Graz 1970, p. 39 (Grazer rechts- u. staatswiss. Studien. 24)

Establishment of coordinated library systems in the realm of tertiary education

Following talks between university and library representatives on possibilities for an improved cooperation, the competent Ministry suggested in 1970 the following measures:

a) exchange of information among the various library facilities within an institution of higher learning, in particular mutual exchange of standardized index cards ("international format"); as a prerequisite, short-term training of department personnel in library work if no library experts are available;

b) avoidance of unnecessary duplication in acquisition, in particular in cases of expensive works, subscriptions to periodicals and serials;

c) liberal access to the library holdings at all existing facilities, if necessary via the main library, but without interference with the primary task of research and teaching;

d) sufficient number of trained librarians at all library facilities, who should be exclusively engaged in library work;

e) supervision of library standardization,and counselling rendered to the departments by the director of the library of the institution of higher learning, who may submit suggestions on the improvement of the library system to the competent academic authorities;

f) transfer of older volumes that are no longer of topical interest to the main library;

g) reactivation of the library commissions, unless such commissions already exist, with the aim of establishing the required contacts within the library system of institutions of higher learning.

Some of these measures have already been carried out.

Furthermore, a concentration of libraries of related teaching and research institutions was suggested. These recommendations have been or are being realized at the following institutions:

Services to the university departments are extended by the University Library of Graz (already 47 departments), the University Library of Vienna (at present 30 departments), and the University Library of Salzburg (10 departments). The number of university departments to which library services are rendered is steadily increasing.

In Innsbruck a centralized library system was established for the Faculty of Civil Engineering and Architecture, the Faculty of Theology, the Faculty of Law, and the Faculty of Medicine; a concentration of smaller library units of the Faculty of Arts and Sciences has been initiated.

At the Linz School of Economics and Social Sciences the concentration of all departmental libraries into 12 specialized libraries is envisaged; 6 of them have already been established.

At the Klagenfurt School of Educational Sciences a pilot project concerning an integrated library system is being carried out.

At the other institutions of higher learning attempts are being made to concentrate subject-related departmental libraries into specialized libraries, such as the central library of the Departments of Physics of the University of Vienna, which has existed for several years, and the chemical central library of the Technical University of Vienna, which was established in 1972.

Improvement of the space situation

The space available to the library largely determines the work and the quality of the services rendered.

Thus, in 1972 the Federal Ministry of Science and Research decided that library experts be consulted when new libraries are built and existing ones are altered or extended. This is the only guarantee for a functional approach to library planning based on a detailed knowledge of library operation.

At present, 13 libraries or library facilities at institutions of higher learning are under construction; 24 are in the planning stage, including an underground book depot of the Austrian National Library, which is to store outdated literature from the overcrowded Federal libraries in Vienna.

Analysis of the present situation

As a prerequisite for comprehensive planning activities, an analysis of the situation was carried out in 1971.
The following libraries were included in this investigation:
- university libraries;
- libraries of other degree-granting institutions of higher learning, the Academy of Fine Arts and the art schools;
- other library facilities in the realm of higher education;
- collection of printed publications at the Austrian National Library (1);

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(1) The inclusion of the collection of printed publications at the Austrian National Library in this statistical inquiry, which concerns primarily universities, and in this Report seems justified on the grounds that the above collection is predominantly used by students of the Vienna institutions of higher learning.

- Study Library Linz (1).

Not included were the museum libraries, the library of the Academy of Sciences as well as libraries of scientific institutions, even though these predominantly serve the purpose of scientific research. (2)

Tables 1 to 3 give a survey on the period under discussion with respect to library holdings, regularly kept periodicals, new additions, expenditures for new acquisitions, personnel (broken down according to trained library staff and other personnel) in the entire field of higher education.

A total of 735 departments were analyzed, including the libraries of the Faculty of Theology and Law and Political Science and the central library of the Departments of Physics of the University of Vienna; not included, however, was the library of the Faculty of Civil Engineering and Architecture of the University of Innsbruck, which constitutes a part of the University Library of Innsbruck, nor the Klagenfurt School of Educational Sciences, at which there are no departmental libraries. Of these 735 departments, 619 do have library facilities. Among those that have no library faciliti (116) are mainly those departments that are serviced by one of the above mentioned Faculties or central libraries. The departmental libraries covered by the analysis differ in size and importance; they range from small reference units for the department head and his staff to major specialized libraries, which, at least in part, also render services to the students

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(1) This library was included in this Report for reasons as stated in footnote (1) previous page.

(2) The "Handbuch Österreichischer Bibliothekare", part I, Vienna, Österreichische Nationalbibliothek 1971, contains a list of all scientific libraries in Austria, including also major libraries outside the direct competence of the Federal Ministry of Science and Research, such as the ministerial libraries, provincial libraries, the libraries of bodies incorporated under public law as well as the big scientific private libraries.

Table 17: Additions in 1971

	main libraries	library facilities	total
Austrian National Library	41,237	-	41,237
University of Vienna	27,037	81,410	108,447
Technical University of Vienna	6,777	7,650	14,427
Vienna School of Economics	3,496	6,358	9,854
Vienna School of Agriculture	1,891	2,206	4,097
Vienna School of Veterinary Medicine	797	1,001	1,798
Vienna Academy of Fine Arts	974	-	974
Vienna School of Music and Dramatic Art	1,047	-	1,047
Vienna School of Applied Art	373	-	373
University of Graz	25,930	26,954	52,884
Technical University of Graz	2,912	5,994	8,906
Graz School of Music and Dramatic Art	505	-	505
University of Innsbruck	21,626	29,803	51,429
University of Salzburg	9,789	49,722	59,511
Mozarteum	2,065	-	2,065
Study Library Linz	(3,500)	-	(3,500)
Linz School of Economics and Social Sciences	4,635	17,780	22,415
Klagenfurt School of Educational Sciences	2,688	-	2,688
Leoben School of Mining and Metallurgy	1,300	997	2,297
Total	158,579	229,875	388,454

( ) estimated

Table 18: Library holdings in 1971

	main libraries	library facilities	total
Austrian National Library	2,064,089	-	2,064,089
University of Vienna	1,712,627	1,715,433	3,428,060
Technical University of Vienna	338,694	164,130	502,824
Vienna School of Economics	170,270	110,358	280,628
Vienna School of Agriculture	132,370	75,487	207,857
Vienna School of Veterinary Medicine	48,555	26,824	75,379
Vienna Academy of Fine Arts	59,752	-	59,752
Vienna School of Music and Dramatic Art	66,329	-	66,329
Vienna School of Applied Art	10,245	-	10,245
University of Graz	755,935	548,849	1,304,784
Technical University of Graz	104,289	101,726	206,015
Graz School of Music and Dramatic Art	17,215	-	17,215
University of Innsbruck	758,083	489,887	1,247,970
University of Salzburg	306,258	335,087	641,345
Mozarteum	35,232	-	35,232
Study Library Linz	(181,857)	-	(181,857)
Linz School of Economics and Social Sciences	66,515	89,496	156,011
Klagenfurt School of Educational Sciences	172,404	-	172,404
Leoben School of Mining and Metallurgy	81,247	34,499	115,746
Total	7,081.966 +	3,691,776	10,773,742

( ) estimated
+ losses included

Table 19: Library holdings, additional expenditures on new acquisitions in the years 1968-1971, personnel

	total (1)	libraries of institutions of ligher learning	other library facilities	ratio libraries of institutions of higher learning to other library facilities (2)
holdings 1968	not established	approx. 3,900,000	approx. 2,390,000	1:0.6
holdings 1971	10,773,742	4,474,843	3,691,776	1:0.8
additions 1969-1971	not established	approx. 600,000 (3)	approx. 1,300,000	1:2.16
current periodicals	55,734	17,971	24,530	1:1.36
expenditure for new acquisitions:				
1968	55,632,592	14,950,057	33,778,652	1:2.26
1969	60,042,821	15,928,346	37,732,255	1:2.3
1970	70,125,419	16,268,829	46,364,720	1:2.85
1971	78,702,380	17,880,217	52,675,974	1:2.94
personnel (4)				
librarians	321.5	164	51	1:0.37
non-librarians	610.8	150.4	372.3	1:2.4
total	932.3	314.4	433.3	1:2.06

(1) Collection of printed publications at the Austrian National Library, libraries of institutions of ligher learning (including the libraries of the Academy of Fine Arts and the art schools), other library facilities at institutions of higher learning, and the Study Library Linz

(2) Without the Klagenfurt School of Educational Sciences

(3) Including free copies of works published or printed in Austria

(4) Decimal numbers are caused by part-time personnel

A comparison between the libraries of institutions of higher learning and other library facilities at universities reveals that the libraries of institutions of higher learning increasingly lag behind in new acquisitions and the funds available for them. This need not necessarily be regarded as a disadvantage. The necessity of a rapid and complete supply of the institutions of higher learning with topical research literature will probably shift the emphasis toward research-related libraries, whereas the libraries of the universities themselves will take over mainly central and coordinating tasks. Prerequisites, however, would be: centralization of smaller units into efficient, larger libraries or, if not enough space is available, at least into administrative units, a proper library service and a central record of available literature.

A further problem is the recruitment of personnel for numerous departmental libraries in order to guarantee a smoothly functioning library service and cataloguization. Tables 17 - 19 show that in 1971 at Faculty and departmental libraries there were only 61 librarians for a total of 3.5 million volumes, 24,530 periodicals and an average of 400,000 additional volumes per year. (Those librarians are mainly employed at the Faculty and central libraries as well as at a few of the major departmental libraries). Most of the departmental libraries, however, are administered by persons who are not professionally trained librerians. Among them there are university assistants, who are thus prevented from fulfilling their primary tasks in research and teaching, as well as administrative and auxiliary personnel. This situation was remedied, at least to a certain extent, by crash courses in librarianship, arranged by the libraries of the institutions of higher learning for such persons.

The investigations covered not only the above-mentioned problems (holdings, additions, data on new acquisitions and personnel), but also questions such as the placement of the collections in reading rooms, workrooms or storage rooms, exchange, records (number and type of catalogues, cataloguization rules, recording of fields of specialization, classification, documentation), use of the library (borrowing, open-shelf system, opening hours, reading places), organization and planning.

The findings of the investigation will serve as bases for
- investigation into weak points;
- examination of the working process from the viewpoint of business management;
- library user analyses;
- improvements of the library facilities, mainly at the large libraries; and
- planning of coordination measures.

Table 20 lists the funds made available to the entire library system in 1971 and gives the ratio between the funds made available for main library and those for other library facilities. The desired intramural and, if possible, extramural cooperation and coordination as concerns the selection of books, the creation of central records and the rationalization of the library operation, will most likely bring about major relative savings over a longer period of time. These measures can be implemented only gradually and will require an adequate increase in the number of qualified library personnel, a generous improvement in the space situation, and the extensive use of modern technical resources. For the extension and the reform of scientific libraries further substantial increases in funds will be required, especially for a transitional period of several years. This is even more true since the book prices have gone up considerably in recent years.

The material expenses for scientific libraries (Austrian National Library, university libraries, main libraries of other degree-granting institutions of higher learning and Study Library Linz) more than doubled between 1971 (Sch. 25 million) and 1974 (Sch. 64.5 million). Not included in these figures were the other library facilities for degree-granting institutions of higher learning and the libraries of the Academy of Fine Arts and the art schools, since they are financed through university loans.

Table 20: Funds made available in 1971

	main libraries Sch.	library facilities Sch.	total Sch.
Austrian National Library	5,673,198	-	5,673,198
University of Vienna	4,022,213	14,892,394	18,914,607
Technical University of Vienna	1,851,291	3,074,288	4,925,579
Vienna School of Economics	447,756	1,960,475	2,408,231
Vienna School of Agricult.	446,682	924,420	1,371,102
Vienna School of Veterinary Medicine	239,772	603,222	842,994
Vienna Academy of Fine Arts	219,874	-	219,874
Vienna School of Music and Dramatic Art	85,722	-	85,722
Vienna School of Applied Art	156,050	-	156,050
University of Graz	3,032,166	7,061,993	10,094,159
Technical University of Graz	625,414	2,220,159	2,845,573
Graz School of Music and Dramatic Art	321,976	-	321,976
University of Innsbruck	3,474,913	8,096,104	11,571,017
University of Salzburg	1,512,041	10,494,735	12,006,776
Mozarteum	(340,000)	-	(340,000)
Study Library Linz	(800,000)	-	(800,000)
Linz School of Economics and Social Sciences	1,699,997	2,925,514	4,625,511
Klagenfurt School of Educational Sciences	549,369	-	549,369
Leoben School of Mining and Metallurgy	527,972	422,670	950,642
Total	26,026,406	52,675,974	78,702,380

( ) estimated

2.10.4 Electronic data processing

For several years electronic data processing has been used at degree-granting institutions of higher learning for specific teaching and research tasks. For some time EDP has also been applied to special fields of university administration, such as the registration and immatriculation of students or the storage of examination data. The caldulating time of all university computing centres in Austria is divided up among the three main fields of application, i.e., research, teaching and administration, approximately 70 : 20 : 10 percent, respectively.

An evaluation of EDP in the scientific-academic realm must always start from the fact that the function and structure of scientific computing centres differ essentially from the function and structure of purely administrative or commercial ones. Characteristics of scientific computing centres are:

1. The computing intensity generally surpasses the data input and output intensities (as opposed to administrative and commercial computing centres where the data structure and the great number of individual data to be processed play a bigger role than does the complexity of internal computing operations, which can usually be reduced to the four fundamental operations of arithmetic).

2. As a rule (to which there are only a few exceptions) the users in the scientific realm elaborate and code their programmes themselves.

Situation in 1970

In Austria, the first major computers were installed at the beginning of the 1960's (1961: University of Vienna: Datatron (Burroughs); 1964: Technical University of Vienna: IBM 7040).

These two computers were the biggest computer installations in the scientific-academic realm until the end of the 1960's. In addition, up to 1970 several small- or medium-sized computers were installed at various universities, such as the Medizincomputer Vienna (IBM 360/30) and installations at the Vienna School of Economics, Leoben School of Mining and Metallurgy, Linz School of Economics and Social Sciences (an IBM 1130 each)., Vienna School of Agriculture (IBM 650). In Graz, the external calculating time was purchased from the computing centre Graz (Kooperatives Institut), consisting of two UNIVAC installations. Up to 1970 a ZUSE 23 operated in Innsbruck. The efficiency of the individual computers in 1970 was as follows:

University of Vienna: Technical University of Vienna: Innsbruck: Graz: Linz (or Vienna School of Economics and Leoben School of Mining and Metallurgy, respectively): Vienna School of Agriculture = 1.4 : 0.7 : 1.8 : 1.2 : 0.07 : 0.03.

From the organizational point of view, the period up to 1970 was characterized by the fact that the universities did not have their own institutionalized computing centres, but the scientific departments operated the computers besides fulfillin their own teaching and research tasks. Examples are: University of Vienna: Department of Statistics; Technical University of Vienna: Department of Numeric Mathematics; Leoben: Department of Deformation Technology, etc. This organization was unsatisfactory, since the pure service functions of a computing centre were mixed with the teaching, research and administrative tasks of a university department. Furthermore, there was always the danger - as the OECD pointed out in its science review - that the users who operated their own computers did not accord equal treatment to outside users.

1970 - 1974

The most important measures of the Federal Ministry of Science and Research, newly founded in 1970, for the technical and organizational improvement of EDP in higher education were the following:

1. An expert committee, consisting of eminent EDP specialists in the scientific and economic fields, was instituted to elaborate medium- and long-term plans, and to give personal advice to the Federal Minister.

2. For the first time scientific methods, based on numerous empirical studies, were used for the elaboration of a medium-term forecast of the calculating time required by the individual universities. The most important finding was that the calculating demand is expected to increase at an annual rate of 40 to 60 percent. The lower limit will be reached if university departments are included that are already clients of the computing centres. The upper limit will be reached if one takes into account that in the future computing time will also be required by departments which have not used EDP to date. This growth rate is comparable to the growth rates recorded in other countries or is even exceeded by them (e.g., Denmark, Berlin, etc.).
One may assume that a computer is fully utilized if it operates 6,000 hours per year. Thus, 1971 was the last year when the available calculating capacity was just sufficient for the Vienna area. In Linz and in the Graz area the situation was similar. In 1971 the capacity available in Innsbruck was increased by the installation of a CDC 3300, which will help to meet the demand until approximately 1975. In Styria the calculating time rented from the computing centre of Graz had to be increased by 50 percent in 1973 in order to somehow meet the computing demand. Presently, Salzburg and Klagenfurt do not have their own computers.

In Salzburg the computing demand is met by renting calculating time from the Provincial Government of Salzburg. In Klagenfurt it is possible for the School of Educational Science to share the computer installed at the business academy of the city. The computer presently installed in Linz is in any case too small - there, too, use is made of external calculating time.

3. A further immediate measure was an arrangement among the University of Vienna Faculty of Medicine, the Reactor Centre of Seibersdorf and the Vienna School of Agriculture. A new computer (IBM 370/145) was installed at the University of Vienna Faculty of Medicine for specific scientific development projects. The former computer of the Faculty of Medicine (IBM 360/30) was transferred to Seibersdorf (Austrian Study Association for Nuclear Energy Ltd.), the Seibersdorf Computer (IBM 1130) to the Vienna School of Agriculture. Thus the EDP demand of three major scientific institutions will be met for the next three years by renting one new computer only.

4. The certainly most important measure in the period mentioned above was the very comprehensive preparatory work for the establishment of a computer network in the area of Vienna.

5. In the organizational sector, a further important phase of concentration took place in the scientific-academic realm. So-called inter-Faculty computing centres have been gradually established at all Austrian universities. They are directly under the control of the Academic Senate and are in charge of all university affairs concerning the application and operation of EDP. According to the latest findings in business administration and organizational theory, a computing centre constitutes an undertaking with service function It should have an optimal management and provide optimal services. As shown by experience, this institutional independence guarantees the individual users a reasonable and just division of calculating time and helps to clarify the

often difficult question of priority. Such inter-Faculty computing centres consist of at least two units: one unit is responsible for the maintenance of the operation (including servicing the hardware and software or system programmes); the second unit provides for consultation and training in programming and for the elaboration of highly specialized user programmes.

Computer network in the Vienna area

As early as 1971 serious bottlenecks in the fields of EDP became recognizable in the area of Vienna; therefore preparatory work was immediately started to extend the computing capacity. Two extreme alternatives were under discussion:

1. A gradual extension of the various individual computers installed in the Vienna area. Advantage: each university would have its own computer. Disadvantage: the rather limited financial means would be split up. Certain highly specialized user programmes (e.g., high-energy physics, theoretical and physical chemistry, etc.) can be solved only by very large computers that have an enormous core-memory capacity and a very high internal calculating speed. Such large-scale computers, however, lie in a financial range that excludes a purely decentralized approach from the very beginning.

2. Concentration on installing one large-scale computer and connecting all the other Vienna universities to that computer by means of terminals and data teleprocessing lines. This plan was rejected for three reasons:
the technical prerequisites for teleprocessing are still most inadequate in Austria; relatively few experiences have been gained with network operation; possible defects in the large-scale computer would endanger the entire EDP supply to the Vienna institutions of higher learning at one blow.

After lengthy deliberations the expert committee therefore decided for a compromise, namely a large scale computer at the Technical University of Vienna and a medium-sized computer at the University of Vienna.

These two computers will be linked with each other by means of a user-to-user connection to form a network. They will operate according to a system of internal load distribution, i.e., the user does not know as a rule on which of the two computers his programme is being processed. This plan is optimal also insofar as most users in the area of Vienna are concentrated at the two universities mentioned above, which creates considerably fewer problems concerning data teleprocessing lines. The Vienna area comprises altogether more than 50 percent of all Austrian students as well as about 50 percent of all the chairs, professors and assistants of all Austrian institutions of higher learning. The computer network will start operation in the course of the next year. Roughly speaking, 50 percent of the EDP demand in the scientific-academic field will thus be met for the next few years. A later extension of the capacity of the computer network is possible and planned.

The efficiency of the computer network is about 10 times as high as that of the present computer installation at the University of Vienna.

From the procedural aspect, this project is exemplary for any further EDP planning in the scientific-academic realm. The main characteristics of the procedure adopted for the invitations to tender and awarding the contracts were the following:

a) demand-oriented planning;
b) projecting, invitation to tender, and evaluation independent from any commitments to individual business undertakings;
c) equal conditions of competition for all bidders;

d) more objective evaluation procedures due to test-runs and the definition of evaluation standards by making use of methods taken from the mathematical evaluation theory.

The computer network will consist of two installations of the CDC Cyber series:

Technical University of Vienna	-	Cyber 74,
University of Vienna	-	Cyber 73.

Because of the public invitation to tender and the rigorous evaluation,most of the bidding firms offered considerable discounts on the list price. Thus, for the next five years the computer network to be installed will cost about 15 million Austrian schillings less per year than would correspond to the list prices for the two computers.

The organization of the computer network will be that of an inter-university computing centre under the joint control of the Technical University of Vienna and the University of Vienna. This means that after establishing the above-mentioned inter-Faculty computing centres a further step has been taken towards an oranizational concentration. The supreme body of this inter-university computing centre will be an authorized commission consisting of equal numbers of representatives of the Technical University of Vienna, the University of Vienna and the Academy of Sciences. The detailed definition of the tasks and the description of the organizational infrastructure of the university computing centres have already been incorporated in the government bill for a University Organization Act.

In the Vienna area the demand for calculating time (except for special EDP fields) will be met by the establishment of the computer network. The smaller institutions of higher learning in Vienna as well as some institutes of the Austrian Academy of Sciences will be gradually connected to the computer network by means of data teleprocessing lines. Also, data transmission lines from the computer network to the individual universities in the Federal Provinces will be established by and by. In the course of 1974 and 1975 a data transmission network between the individual universities via four-wire user-to-user connections will be established. Completely satisfactory data teleprocessing will, however, be started only after the Postal and Telegraphic Administration has provided faster lines (broadband channels) with a capacity that is approximately 10-20 times as high as that of the present lines. It should be possible to reach this goal in 3-5 years from now. For considerations similar to those regarding the Vienna area (particularly because of the highly decentralized teaching) it might not be reasonable to concentrate the entire EDP capacity in one university town. Rather, the aim should be a national computer network with several priorities. At present, the quantitative demand peaks lie

a) in the Vienna area
b) in the Graz area
c) in Linz
d) in Innsbruck.

Therefore, a solution will probably have to be found which provides for the above-mentioned four regional computing centres as main junctions within the Austrian computer network. The computing capacity at these four junctions would have to be gradually extended in accordance with the regional demand. Simultaneously, the capacity of data transmission to the remaining universities would have to be rapidly increased (in the Vienna area this would concern above all the School of Economics, the School of Veterinary Medicine, the School of Agriculture and the Austrian Academy of Sciences and administrative and planning tasks of the Ministry. Leoben would have to be connected to Graz, Salzburg to Linz or Innsbruck. For Klagenfurt, a temporary solution would probably be a connection to the computer network in Vienna). By transferring the computer presently installed at the University of Vienna to Linz, the regional computing demand in the Linz area will also be met for the next few years. For the Graz area, too, the gradual increase of independent calculating capacity will have to be taken into consideration, since the extent of renting external calculating time has already reached the limit of profitability.

The medium-term aim should, however, be the establishment of a national computer network which would constitute - in the sense specified above - a technically and economically optimal balance between the unfortunately high degree of decentralization of scientific users and the necessity for technical and organizational concentration in operating EDP systems. One must, however, not overlook the fact that besides the general EDP requirements in the scientific-academic field, which can be met by a national computer network, there will always be special fields that call for individual solutions. An example would be the Faculty of Medicine, which uses its own computer for real-time processing (i.e. permanently) for scientific developments in hospitals and clinics. On the other hand, for information science, which was instituted as a study programme in Vienna and Linz, the computer is interesting not so much as a universal calculator, but rather as an object of research. In the non-digital sector, too, it will often be necessary to find special solutions. Their costs, however, will be considerably below those of the other computer equipment. Here it is already most difficult to draw the line between the analogous and hybrid calculating techniques on the one hand and the measuring and automatic control technology, on the other.

Computer networks in the form described above have already been installed in a number of other countries. Mutual load distribution has turned out to be the cheapest way to offer and utilize available calculating capacity, a concept that in Austria, too, has long been realized in the field of electric power supply ("Verbundgesellschaft").

2.10.5 Administrative reform

The rapid increase in the number of students over the past decade as well as the growing variety of scientific subjects and educational programmes have not only confronted the universities with problems of personnel and didactics, but have also made new demands on the university administration which can no longer be met by the traditional university structure. The traditional university administration is characterized by two features:

- great decentralization of administrative tasks;
- as a consequence, the personnel is in charge of both scientific and administrative tasks.

Since efficient central facilities were not available and were not established in the course of the extension of teaching activities, the foundation of new departments, etc., the departments themselves had to cope with the new administrative tasks.

Under such circumstances, the expansion of the traditional administrative tasks and the adoption of new administrative responsibilities necessarily resulted in withdrawing the scientific department staff from their teaching and research tasks and using them for administrative ones.

Not even the considerable increase in the academic intermediary staff at the universities had the desired effect on the teaching process.

Furthermore, this administrative organization prevented the specific use of technical facilities, e.g. large-scale EDP equipment, since even large university departments are units too small for the economical use of most technical facilities.

The old provisions concerning the universities and other institutions of higher learning as well as the University Organization Act of 1955 did not refer to any special need for a more detailed regulation of the central facilities of the institutions of higher learning. (1)

The university administration has to find a solution for a number of problems in the course of the university reform; a considerable part of them can and has to be solved prior to the reorganization of the university structure. Such tasks not only are an important aspect of the overall reform of the universities, but to a very large extent also constitute the prerequisites for the reform of universities in various other areas. Above all, the following tasks of the administrative reform are important:

1) rationalization of the traditional branches of university administration;
2) taking over from the university departments all administrative tasks which are suited for central handling;
3) the creation of new administrative facilities required for a modern university as well as the establishment of central facilities for scientific auxiliary functions;
4) recording of the highest possible amount of data relevant for teaching, research and administration in official statistics, replacing ad hoc surveys by current data collection as far as possible;
5) the most important, however not the only means of performing these tasks is electronic data processing.

The university administration has to fulfill at least part of these tasks. This is a necessary though insufficient prerequisite for other phases of the university reform, such as the study of didactics and structural reforms, and for all considerations related to the functions and tasks of the individual categories of university teachers, etc.

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(1) See L. Otruba "Die Bedeutung der elektronischen Datenverarbeitung für die Hochschulreform" (published by the Federal Ministry of Science and Research), 1972

Within the scope of the reorganization of university studies by the General University Studies Act the first legal steps have been taken for the administrative reform at the universities in the light of the above mentioned problems.

Section 12 governs the immatriculation and registration procedures. On the basis of these provisions the immatriculation and registration forms have been standardized at all Austrian universities. The installation of records offices at the individual institutions of higher learning and the gradual introduction of electronic data processing not only simplify the registration procedure which prior to 1967 constituted a considerable burden on the students and the university administration, but they also provide for a central file of immatriculation and registration data. From the winter semester 1974/75 onward the data for student statistics will be produced in the course of the regular administrative process. Except during immatriculations, the students will no longer be required to fill in the detailed statistical forms.

Section 33, subsec. 3 of the General University Studies Act provides for the establishment of a central examination file. All certificates are to be collected by the records offices. Thus, the achievements of the student in his studies and the period of time he required for examinations will be stored in a central file.

The Technical University of Vienna and the Linz School of Economics and Social Sciences have performed successful pilot studies with electronic data processing for the examination file.

Since 1971 the notifications concerning applications for scholarships have been prepared by means of EDP.

The Linz School of Economics and Social Sciences and the Technical University of Graz are preparing EDP space files

The General University Studies Act is concerned only with those parts of university administration which are directly related to the studies. The government bill on a University Organization Act deals in greater detail with the central administration of the institutions of higher learning.

A number of technical resources and the increased use of EDP for administration and data files permit the reform of the university administration.

The administration of the newly established institutions of higher learning has been much more centralized from the very beginning. Particularly the Linz School of Economics and Social Sciences has reached a remarkable standard of administration (central accounting, standardization of room equipment, etc.).

3. INSTITUTIONS OF HIGHER LEARNING IN THE FIELD OF ART (ART SCHOOLS)

3. INSTITUTIONS OF HIGHER LEARNING IN THE FIELD OF ART (ART SCHOOLS)

In Austria there are six art schools:

a) Akademie der bildenden Künste in Wien (Vienna Academy of Fine Arts)
b) Hochschule für angewandte Kunst in Wien (Vienna School of Applied Art)
c) Hochschule für Musik und darstellende Kunst in Wien (Vienna School of Music and Dramatic Art)
d) Hochschule für Musik und darstellende Kunst "Mozarteum" in Salzburg (Salzburg School of Music and Dramatic Art "Mozarteum")
e) Hochschule für Musik und darstellende Kunst in Graz (Graz School of Music and Dramatic Art)
f) Hochschule für künstlerische und industrielle Gestaltung in Linz (Linz School of Artistic and Industrial Design)

The Schools mentioned under b) to e) were called "Academies" up to 1970. Under the "Kunsthochschul-Organisationsgesetz" (Art School Organization Act) of 1970 they were accorded the rank of institutions of higher learning and obtained statutes typical of such institutions (in the following to be called "university statutes" for short).

The Linz School of Artistic and Industrial Design was established in 1973 and was incorporated in the Art School Organization Act.

The Art School Organization Act does, however, not apply to the Academy of Fine Arts in Vienna, since this institution has had a university statute since 1872 (1).

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(1) As to the organization of art schools the following

Footnote (1) ctd.

legal provisions are applicable:

1) the Federal Act of November 18, 1955, on the Organization of the Academy of Fine Arts (Academy Organization Act), BGBl. Nr. 237, as amended by the Federal Act, BGBl. Nr. 92/1959;

2) the Federal Act of January 21, 1970, BGBl. Nr. 54/1970, on the Organization of Art Schools (Art School Organization Act), as amended by the Federal Act, BGBl. Nr. 250/1973;

3) the Federal Act of February 3, 1971, containing special rules on the organization of art schools (Art School Regulations), as amended by the Federal Act, BGBl. Nr. 252/1973. For further information on the previous history and on the contents of the Art School Organization Act and the Art School Regulations see University Report 1972, pp. 273 ff.

4) the Federal Act of May 9, 1973, on the establishment of the Linz School of Artistic and Industrial Design, BGBl. Nr. 251.

3.1 ORGANISATIONAL REFORM

Efforts for a reform of the art academies were first reflected in the Art School Organization Act, BGBl. Nr. 54/1970, and in the Art School Regulations,BGBl. Nr. 70/1971.

The organizational reform, in the course of which the art academies were granted the status of institutions of higher learning, was completed by the adoption of these Federal Acts. The reasons for granting the art academies the rank of institutions of higher learning and the fundamental organizational changes will be presented below.

The art academies were teaching establishments sui generis of a so-called "mixed character" (they offered secondary and tertiary education). This mixed character was also reflected in their organization: they were headed by Presidents, who were appointed by the Federal Minister of Education, and subject to orders from the Federal Ministry of Education. Although collegiate bodies were instituted at the art academies,they lacked in the autonomous sphere of competence characteristic of the collegiate bodies of professors at the universities; they only had consultative functions.

Relatively early one realized that the education offered by those teaching establishments was primarily tertiary in character. The objectives as set forth in the Art Academy Act ("the promotion of artistic talents to the highest level") suggested that the art academies de facto had the character of institutions of higher learning. This fact was repeatedly taken into consideration by the legislative bodies (1) as well as by the Federal executive organs. In recognition of the fact that the art academies were teaching establishments with the characteristics of institutions of higher learning, the Federal Ministry of Education largely refrained from exercising its powers of direction in the (quasi) autonomous sphere of competence. This, of course, was not unproblematic, since the statutes of the art academies did not provide for self-administration (the autonomy of institutions of higher learning) and thus lacked in the logical basis necessary for granting an autonomous sphere of competence.

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(1) Special reference should be made to sec. 1, subsec. 1 of the Student Union Law, BGBl. Nr. 174/1950, to sec.68, subsec. 3 of the University Organization Act (Conference of University Rectors), BGBl. Nr. 154/1955, to the Act on Grants-in-Aid or to sec. 1, subsec. 1, lit. b of the Study Promotion Act, BGBl. Nr. 421/1969, to sec. 14 and sec.15 of the Federal Act on Technical Study Programme BGBl. Nr. 290/1969.

For these reasons the state authorities had to take steps to accord de lege the status of institutions of higher learning to the art academies. These efforts found large support by representatives of the intellectual elite, who became more and more convinced of the equivalence of scientific and artistic teaching, particularly since art academies increasingly fulfilled tasks which in part corresponded to research carried out by universities and in part to research in the narrower sense. The art academies themselves demanded legislative recognition as institutions of higher learning. All these circumstances called for a legal recognition of the art academies as institutions of higher learning, a status which was de facto generally recognized. However, it would not have sufficed to "transform the art academies into institutions of higher learning" without any further organizational modifications; the essential features of a university statute, above all the development of self-administration in the autonomous sphere, had to be taken into consideration. These features are defined in the University Organization Act of 1955, which governs university organization.

An incorporation of the art schools into this Federal Act was not possible for the following two reasons:

First, the conditions prevailing at the art academies differed widely from those at the universities both with regard to the organizational forms, which had already proven to be successful, as well as the teaching methods.

Second, in the past few years the reform of the organization of universities and thus also the change of a great number of the provisions contained in the University Organization Act were being discussed, and these discussions had already yielded some concrete results.

Thus, the Art School Organization Act had to take into consideration:

a) the general principles concerning the structure of an institution of higher learning as laid down in the University Organization Act;

b) the actual conditions prevailing at the art academies at the time the bill was prepared; and

c) the more or less concrete results which the discussion on the reform of higher education had yielded.

In accordance with these different sources, the Art School Organization Act, the external structure of which largely copies the successful concept of the University Organization Act, therefore contains:

1) Provisions modelled after the University Organization Act in its amended version; they concern mainly matters which do not require a different regulation for art schools and where university reform discussions had not yielded any concrete results (example for the first case: article I of the Art School Organization Act, with the exception of sec. 1 and 7; for the second case: sec. 16, subsec. 4 of the Art School Organization Act).

2) Provisions which constitute a codification of the actual conditions existing at the art schools (see article V).

3) New legal provisions which take into consideration the general tendency revealed in the university reform discussion (above all, the demand for participation of all members in the administration within the autonomous sphere of competence) (example: article III - sec. 29).

The Federal Act of January 21, 1970, on the Organization of Art Schools, "Art School Organization Act" for short, contains those provisions that apply to the organization of all art schools alike. The special organizational regulations which had become necessary because of differences in subject-matter between the individual establishments are contained in the Federal Act of February 3, 1971, in which special rules on the organization of art schools were laid down (Art School Regulation), BGBl. Nr. 70/1971.

Autonomy

As already mentioned, the former art academies had no de lege autonomy. In the course of their transformation into institutions of higher learning the legislator granted them a far-reaching independent sphere of competence, since such an autonomy constitutes one of the essential characteristics of a university statute.

Democratization of the decision-marking process

The participation of the so-called "academic intermediary staff" and students in the decision-making process has been realized at arts schools in various ways and to varying degrees.

At the Academy of Fine Arts this co-determination is still in its initial phase, since it is left to the collegiate body of professors whether or not they call representatives of the intermediary staff, civil servants or persons employed in the scientific-administration field without tenure (1) and students into commissions of the collegiate body of professors or into the collegiate body itself. Within the collegiate body, members of the intermediary staff, civil servants and persons employed in the scientific-administrative field without tenure and student representatives - if invited at all - have only a consultative function and the right to submit motions.

At the other art schools (School of Applied Art in Vienna, Linz School of Artistic and Industrial Design, Vienna School of Music and Dramatic Art, Salzburg School of Music and Dramatic Art "Mozarteum", Graz School of Music and Dramatic Art) the co-determination of the academic intermediary staff and students has gone much further. Being of a more recent origin than the Academy Organization Act (1955), the Art School Organization Act of 1970, which applies to those art schools, incorporates a number of results achieved in the university reform discussion.

The democratization of the decision-making process at art schools is reflected in the relevant provisions of the Art School Organization Act, according to which the intermediary staff and the students have a permanent seat and vote in the collegiate bodies of the art schools. In some cases the number of representatives is specified in the law regardless of the number of teachers and students (the plenary collegiate body of each art school includes, for instance, two representatives each of the intermediary staff and the students). In other cases, e.g., department boards, the composition depends on the number of members belonging to the art school.

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(1) Vertragsbedienstete des wissenschaftlichen Dienstes

The representatives of the intermediary staff are elected by the teachers of the respective category; the students representatives are delegated by the Austrian Student Union. Thus, in principle, tripartite representation of the individual groups is not envisaged at art schools. Exceptions are the study commissions, which are first and foremost responsible for the issuance of academic study regulations, and the school convention. The latter is to discuss general matters pertaining to the art school as a whole and to make recommendations to the plenary collegiate body. These academic authorities are composed of equal numbers of professors, members of the intermediary staff and students.

It should also be noted that at art schools only teachers and students participate in the decision-making process, to the exclusion of the administrative personnel or civil servants and persons employed in the administrative-scientific field without tenure.

The co-determination at art schools also means that the intermediary staff and the students participate in electing all academic functionaries (Rector, deputy Rector, heads of departments, deputy heads of departments).

The experiences gained since the Art School Organization Act came into force can be regarded as predominantly positive, The co-determination has led to intensified discussions of subject-related problems and to a higher degree of transparency in the decision-making process. The criticism that was occasionally voiced at the beginning, namely, that the students were not sufficiently qualified for responsible participation in decision-making, has proved unjustified. It has been particularly the students who have often proposed constructive reforms. Also, the fears that the representatives of the teachers would use their majority in the collegiate bodies to impose their opinions on others have proved to be unfounded. There were only relatively few cases where the groups resorted to block voting. Generally, one can say that the discussions were objective and that the membership in a certain group did not a priori determine the decision.

Departmental structure

The discussion on university reform revealed the tendency to move away from the traditional division into Faculties and to create smaller organizational units comprising study facilities that are related as to subject-matter or course of studies. Such departments were established at the art schools comprising one field of art in its entirety each. The number of departments depends on the size of the individual art schools. Detailed stipulations are contained in the Art School Regulations.

Filling vacancies of teaching posts

The appointment of professors and other teachers in the case of vacancies was regulated analogously to the University Organization Act and the "Habilitationsnorm" (standard provisions governing the habilitatio). The legislator demanded that vacancies and teaching assignments be advertised.

School convention

The school convention - an academic authority for which there exists no precedent in the realm of Austrian higher education - is first and foremost designed to discuss fundamentally important problems of higher education and to submit recommendations to the plenary collegiate body. In addition, the school convention has supervisory functions, which are not expressis verbis mentioned by law, but can be derived from other provisions of the Art School Organization Act.

The School convention is the only academic authority with a tripartite composition, with an equal number of professors, other teachers and students.

The Art School Organization Act and the Art School Regulations do not apply to the Academy of Fine Arts in Vienna. The Academy has had a university statute since 1872. The present Academy Organization Act, as amended by the Federal Act of 1959, was modelled after the University Organization Act of 1955 and the two are largely identical. The Academy Organization Act differs, however, from the University Organization Act insofar as it contains only certain initial references to the right of co-determination of the intermediary staff and the students. Mention must also be made that the Academy is not divided into departments.

3.2 STUDY RULES

At present, only a relatively small range of study programmes at art schools are regulated by law:

- architecture;
- music education (secondary-school teaching qualification);
- education in instrumental music (secondary-school teaching qualification);
- pictorial education (secondary-school teaching qualification);
- handicraft (secondary-school teaching qualification);
- textile work and sewing (secondary-school teaching qualification).

The provisions of the General University Studies Act of 1966, regulating studies at universities, are to be applied analogously to the above study programmes. The Federal Act on Technical Study Programmes, as amended by the Federal Act of 1971, contains, among other things, provisions concerning the study programme "Architecture" at the Academy of Fine Arts in Vienna and at the Vienna School of Applied Art.

The Federal Act on Studies of the Humanities and Natural Sciences (1971) regulates, among other things, the scientific-artistic professional training for the secondary-school teaching qualification (music education, education in instrumental music, pictorial education, handicraft, textile work and sewing).

On the basis of the above legal provisions, ministerial study regulations have been issued. The scientific-artistic professional training for the secondary-school teaching qualification lasts nine semesters. The studies consist of two sections, each of which has to be concluded with a diploma examination. The first section, comprising four semesters, introduces the student into the studies and into the fundamentals of his field; the second section comprises five semesters and requires a written diploma thesis; it is designed to intensify the student's knowledge and to offer a more specialized training.

In order to acquire the secondary-school teaching qualification, the student has to combine two study programmes. He has a wide range of choice. In principle, all combinations of scientific and scientific-artistic study programmes leading to the secondary-school teaching qualification are admissible. The Federal Act on Studies of the Humanities and Natural Sciences, however, provides that the ministerial study regulations may prescribe certain combinations of study programmes. In the case of scientific-artistic study programmes leading to the secondary-school teaching qualification such a restriction was imposed: the study programme "education in instrumental music" can be combined only with the study programme "music education".

All the study programmes leading to the secondary-school teaching qualification are governed by the principle that the studies have to be combined with the pedagogical training for secondary-school teachers.

The pedagogical education comprising the general training in pedagogy was instituted at the universities for students of the scientific-artistic study programmes (secondary-school teaching qualification) last but not least for economical reasons, since it does not differ from the general pedagogical training offered in other study programmes leading to the secondary-school teaching qualification. The training in didactics and the preparation for actual school practice are offered at the art schools.

An essential innovation in pedagogical training was brought about by the Federal Act on Studies of the Humanities and Natural Sciences. The legislator provided for an obligatory 12-week practical training period which has to be completed at secondary schools. Thus, the student will be confronted [illegible] the actual school situation over a longer period of [illegible]. In addition, he has the opportunity to try out his pedagogical-didactic abilities and to apply acquired theoretical knowledge in actual situations.

The shortage of teachers, which can already be felt, neccessitates an intensification of the training of prospective secondary-school teachers for scientific-artistic subjects.

The study programmes "pictorial education", "handicraft" and "textile work and sewing" were instituted at the Linz School of Artistic and Industrial Design. Plans exist concerning further training possibilities for art-teachers at the Salzburg School of Music and Dramatic Art "Mozarteum".

At the schools of music and dramatic art the study programmes offering professional training for secondary-school teachers are supplemented by training courses for other teachers as well.

Mention should be made of:

1) The study programme "Training of instrument and voice teachers". Its aim is to train teachers for teaching at conservatories and music schools and to become professional teachers in the field of instrumental and vocal music.

2) The programme on youth and adult music education. This programme is to train music teachers for elementary instruction at music schools. Furthermore, primary-school teachers are to be offered the opportunity of further education in music.

3) The study programme "Rhythmic musical education", which is subdivided into two areas (elementary level and training that leads to the entitlement to attend a university) is devoted to the training of teachers for the rhythmic musical education at music schools, training establishments for kindergarten teachers and at special schools.
This study programme is offered only at the Vienna School of Music and Dramatic Art.

4) At the "ORFF Institute", a special department of the Salzburg School of Music and Dramatic Art "Mozarteum", courses are offered for teachers who are already working in order to introduce them to the "ORFF method".

At present, only the above mentioned studies leading to the secondary-school teaching qualification and the study programme "architecture" are regulated by law. The admission requirements, the course of studies and the termination of studies are at present regulated by decisions of the collegiate bodies at the art schools.

This situation is anything but satisfactory because of the legal uncertainty involved and the incompatibility with the principle of legality laid down in Art. 18 of the Federal Constitutional Act. For this reason the necessary legal bases for studies at art schools should be created as soon as possible.

The draft of a general art school studies act, which is to constitute the legal framework for the regulation of studies at art schools, is in preparation.

8.3 STUDENTS

In the winter semester 1973/74 a total of 5,822 students of all categories studied at the six art schools; 25 percent being foreigners and 47 percent females.

At present, a valid subdivision into student categories (regular degree students, non-degree students, auditing students, art pupils) cannot be made since no legal definitions exist as yet for these terms and since the categorization still differs at the individual art schools (1).

The total number of students does not always correspond to the sum total of the students in all study programmes, since, especially at music schools, one student often enrolls in two or several study programmes. In recent years this has been the case particularly at the Graz School of Music and Dramatic Art, where there is a relatively great difference between the total number of students and the sum total of students in the individual study programmes. On the other hand, students who did not engage in "full studies" but attended only individual courses were not included in the tables concerning the students in the individual study programmes.

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(1) The statistics prepared by the Austrian Central Office of Statistics permit a categorization of students based on the students' own entries in the statistics forms. We can assume that multiple counts are not included.

These data are used for various purposes (see section 1)

Table 1: Students at art schools
Students of all categories (including art pupils)
Winter semester 1973/74

School	Austrians	Foreigners	Total
Vienna Academy of Fine Arts	507	93	600
Vienna School of Applied Art	503	135	638
Vienna School of Music and Dramatic Art	1,492	826	2,318
Salzburg School of Music and Dramatic Art "Mozarteum"	923	352	1,275
Graz School of Music and Dramatic Art	752	66	818
Linz School of Artistic and Industrial Design	163	10	173

The foreign students came from 58 countries: the largest groups from the Federal Republic of Germany (320), Japan (200), the U.S.A. (185) and Switzerland (80).

Table 2: Entrance examinations at art schools
Winter semester 1973/74

School	Applicants	Accepted	Rejected
Vienna Academy of Fine Arts	278	42	236
Vienna School of Applied Art	323	138	185
Linz School of Artistic and Industrial Design	85	40	45
Vienna School of Music and Dramatic Art	1,538	952	586
Salzburg School of Music and Dramatic Art "Mozarteum"	349	234	115
Graz School of Music and Dramatic Art	353	283	70
Total	2,926	1,689	1,237

It is absolutely necessary to define the individual student categories by law and to develop new student statistics that correspond to the requirements of art schools. At present, the same admission prerequisites apply, in principle, to both Austrians and foreigners. Every applicant has to take an entrance examination before an examination board, which evaluates and assesses the artistic talent and the educational level already achieved. This applies to all study programmes. Different regulations exist for each study programme as to the examination procedure and content of the examination.

Subject to available study places, the student is admitted on the basis of the results achieved in the entrance examination, whereby no differentiation is made between Austrians and foreigners.

Foreigners are required to furnish proof of a sufficient knowledge of German.

In study programmes where the secondary-school leaving certificate is required in addition to the entrance examination, foreigners have to furnish proof of having passed such a leaving examination or an equivalent examination abroad.

In study programmes which are already regulated by law, the provisions of sec. 7, subsec. 6 of the General University Studies Act have to be applied to foreigners analogously. An immatriculation can be effected only subject to available places and in the order of the levels of achievement as evidenced by the application documents. This means that in these study programmes Austrian students have to be given priority.

3.4 TEACHING STAFF

As of January 1, 1974, the following categories of positions existed at art schools:

full professors	112
associate professors	138
assistants	41
"Bundeslehrer der Verw.Gr." L 1 +)	130
"Bundeslehrer der Verw.Gr." L 2 +)	1

In this context we should note that many of the teachers at art schools who belong to the intermediary staff as specified in the Art School Organization Act of 1970, exercise the functions of full professors.
On the other hand, there are professors teaching at art schools who were appointed prior to the enactment of the Art School Organization Act and who do not teach a subject in its entire scope nor an independent sub-area of a subject. According to their functions such teachers are to be counted as members of the intermediary staff. This group, however, is relatively small. In this field of higher education the functions of the teachers often do not correspond to their service ranks. Thus, the following survey on the teaching posts does not contain any conclusive evidence as to the functions of the teachers.

+) Persons corresponding in rank to secondary-school teachers; they fulfill administrative and teaching functions at institutions of higher learning.

Table 1: Positions at art schools as of 1974

School	full professors	associate professors	assistants	Bundeslehrer d.Verw. Gr. L 1	Bundeslehrer d.Verw. Gr. L 2
Vienna Academy of Fine Arts	20	3	17	1	-
Vienna School of Applied Art	18	12	4	19	1
Vienna School of Music and Dramatic Art	35	56	3	53	-
Salzburg School of Music and Dramatic Art "Mozarteum"	16	24	2	29	-
Graz School of Music and Dramatic Art	17	37	6	28	-
Linz School of Artistic and Industrial Design	6	6	4	-	-
Total	112	138	41	130	1

Table 2: Number of positions at art schools

	1971	1972	1973	1974
Full professors	62	72	88	112
Associate professors	90	104	116	138
Assistants	20	25	39	41
Bundeslehrer der Verwendungsgruppe L 1	122	124	134	130
Bundeslehrer der Verwendungsgruppe L 2	1	1	1	1
Total	295	326	378	422

Table 3: "Vertragslehrer"+) and teachers with special teaching assignments at art schools, winter semester 1973/74

School	Vertragslehrer	Teachers with special teaching assignments
Vienna Academy of Fine Arts	-	79
Vienna School of Applied Art	14	67
Vienna School of Music and Dramatic Art	48	161
Salzburg School of Music and Dramatic Art "Mozarteum"	92	80
Graz School of Music and Dramatic Art	25	97
Linz School of Artistic and Industrial Design	1	45
Total	180	529

+) Persons with non-permanent teaching contracts

3.5 THE FOUNDATION OF THE LINZ SCHOOL OF ARTISTIC AND INDUSTRIAL DESIGN

The objectives of this new school were determined by the developments in the fields of natural sciences and technology in our century. The growing industrialization and the development of the industrial society have changed the traditional attitudes toward designing; new concepts of the occupation have emerged or are in the process of development. The idea is gaining ground that industrial production and our life in general must not be guided exclusively by principles of utility and economy; this would sooner or later lead to a "dehumanization" of the life of the individual as well as of society. "Designers" must complement the engineers who are responsible for the technical and economical development.

The following reasons were decisive for according the art school of the City of Linz (secondary-school level) the rank of an institution of higher learning in 1973:

Experiences in Central Europe have shown that an institution of higher learning attracts the greatest number of highly qualified experts from at home and abroad. One of the reasons (apart from the generally much higher reputation held by institutions of higher learning in comparison to other teaching establishments) is certainly the freedom of teaching guaranteed at such art schools. Furthermore, it is only an institution of higher learning that can offer the universality of instruction required for all "designing occupations".

The following arguments were advanced in favour of establishing an art school of artistic and industrial design in Linz:

- the availability of personnel and material at the existing secondary-level art school;
- the integration of industrial practice and theoretical instruction;
- the connections between the existing art school and the ensuing interrelation between art and industry;
- the interest of medium and large-sized enterprises in the training of designers in Linz;
- the intensive care offered to students during their practical training within an enterprise; a training that differs considerably from the practical training during vacations;
- the connection to the Linz School of Economics and Social Sciences;
- the convenient location of Linz as a traffic and industrial centre.

The Federal Chamber of Trade, Commerce and Industry as well as the ceramics industry in Austria have expressed their demands for ceramists with artistic training and have called for appropriate training possibilities. They have made considerable financial contributions to the ceramics class of the Art School. In general, Austria has a considerable back-log in designing which should be made up as soon as possible.

A further argument for the establishment of the Linz School is the demand for art teachers at Austrian secondary schools.

Thus, the main purpose of the Linz School of Artistic and Industrial Design is to train talented persons, thereby enabling them to design and creatively change our visible environment.

The Art School and its various units should be of a size that permits a favourable studying process and personal contacts between students and teachers. The cooperation with the Linz School of Economics and Social Sciences offers the Art School the opportunity to solve its tasks in close contact with scientific institutes.

The organization of this newly founded Art School corresponds to that of the other art schools. In addition, however, it has a body that is unique and has no parallel at another Austrian art school:
the Council of the Linz School of Artistic and Industrial Design. The basic conception underlying the Art School is the necessity for close contacts between the Art School and the "practice", i.e., between art and industry. In accordance with these objectives the legislator provided for a body consisting of experts in the fields of commerce, trade and industry. Its task is to consult academic authorities, submit recommendations and to establish and intensify contacts with the economy.

4. RESEARCH

4. RESEARCH

4.1 PRESENT SITUATION

4.1.1 General survey on research and development in Austria

Total expenditure (by government and industry) on research and development in Austria reached about Sch. 6,400 million in 1974, i.e. about 1.04 percent of the gross national product.

In 1974, 42.94 percent of the overall research and development expenditure were provided by the Federal Government, 11.99 percent by the Federal Provinces, 44.13 percent by business enterprises, and 0.94 percent by other sources. (1)

The latest employment statistics (2) show that in 1970 10,734 persons (full-time equivalent) were engaged in research and development. Of these 3,894 were scientists. Out of this total number 2,762 employees, including 1,811 scientists, were working at institutions of higher learning (1970).

According to the "Österreichischer Forschungsstättenkatalog" (3), published in 1971, Austria has about 1,550 research establishments, 880 of which are in higher education (including the Austrian Academy of Sciences and the Federal advanced training and experimental establishments).

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(1) Compare the 1974 Report of the Federal Government to the "Nationalrat" (Lower House of Parliament), Bundesministerium für Wissenschaft und Forschung", Vienna, 1974.

(2) Austrian Central Office of Statistics and Federal Chamber of Commerce, Trade and Industry; see the 1974 Report of the Federal Government to the "Nationalrat", p. 58.

(3) Österreichischer Forschungsstättenkatalog, Bundesministerium für Wissenschaft und Forschung, Österreichisches Statistisches Zentralamt, Bundeskammer der gewerblichen Wirtschaft, Vienna 1971.

4.1.2 University and university-related research

Definition

University and university-related research (or science-related research) emcompasses

- research at the universities;
- research at the Academy of Sciences;
- research projects promoted and financed by the Fund for the Promotion of Scientific Research;
- research at the institutes of the Ludwig Boltzmann Association;
- research carried out at Federal advanced training and experimental establishments;
- research at private and governmental non-university research establishments and associations that are not engaged in industry-related research. (1)

Scope

In 1974, Federal expenditure on university and university-related research in the narrower sense (i.e., research carried out at universities, advanced training and experimental establishments, the Academy of Sciences, etc.) amounted to about Sch. 1,857.036 million (including Sch. 127.359 million for the Fund for the Promotion of Scientific Research), i.e., 67.72 percent of the total Federal R&D expenditure. Another Sch. 80 million out of the Federal expenditure on government research and another Sch. 110 million out of the Federal expenditure for Austria's participation in research projects carried out by international organizations are spent on university and university-related research in the wider sense (science-related research).

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(1) See the 1972 Report of the Federal Government to the Nationalrat, Bundesministerium für Wissenschaft und forschung, Vienna 1972, p.8.

Thus, in 1974, Federal expenditure on science-related research amounted to some Sch. 2,047 million, i.e., 74.6 percent of the total Federal expenditure on research and the promotion of science.

In 1974, about 170.5 million Austrian Schillings, i.e., 22.3 percent, of the total R&D expenditure of the Federal Provinces were spent on science-related research.(1) According to the latest survey of the Federal Chamber of Commerce, Trade and Industry on industrial research in Austria (2), the industry, transport and construction sectors spent about Sch. 13 million (out of a total of Sch. 2,200 million in 1972) on R&D to be carried out in "schools".

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(1) See the detailed break-down of the R&D expenditure of the Federal Provinces in the 1974 Report of the Federal Government to the Nationalrat, Vienna 1974, pp. 35 ff.

(2) Bundeskammer der gewerblichen Wirtschaft, Die betriebliche Forschung in Österreich 1972, Vienna 1974.

Table 1: Federal expenditure 1971-1974 on research and the promotion of research: by research areas

	Financial statement			
	1971		1972	
	in Sch. million	in %	in Sch. million	in %
1. University and university-related research: (institutions of higher learning, Academy of Sciences, Fund for the Promotion of Scientific Research, higher technical teaching establishments, including scientific institutions) total	1,123.110	70.21	1,437.306	70.24
Fund for the Promotion of Scientific Research	74.000	(6.59)	99.000	(6.89)
2. Governmental research: (experimental and research institutions of the state, museums, general and earmarked funds for research in the interest of the Ministry) total	217.605	13.60	259.505	12.68
a) intramural expenditure	187.547	(86.19)	211.558	(81.52)
- technical experimental and research establishments	66.612	((35.52))	74.935	((35.42))
- agricultural experimental and research establishments	59.215	((31.57))	64.577	((30.52))
- other imtramural expenditure	61.720	((32.91))	72.046	((34.05))
b) extramural expenditure	30.058	(13.81)	47.947	(18.48)

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3. Research in the field of commerce, trade and industry, building (2) and road research (2), total	192.534	12.04	260.331	12.72
a) Industrial Research Promotion Fund	85.000	(44.15)	128.700	(49.44)
b) Technical experiments	6.792	(3.52)	9.593	(3.68)
c) Austrian Study Association for Nuclear Energy Ltd.(1)	82.814	(43.01)	101.250	(38.89)
d) General building and housing research	17.500	(9.12)	18.094	(6.95)
e) Road research	-	-	2.333	(0.90)
f) Other research (Association for Wood Research, Austrian Society for Space Research, etc.)	0.368	(0.19)	0.361	(0.14)
4. Contributions to research projects carried out by international organizations	66.501	4.16	89.041	4.35
Sum total 1-4	1,599.750	100.00	2,046.183	100.00

(1) Methodically adjusted comparative values for the Austrian Study Association for Nuclear Research Ltd.: 1971: Sch. 99.346 million; 1972: Sch. 122.467 million; 1973: Sch. 106.601 million; 1974: Sch. 123.739 million

(2) Falls partly within the governmental sector.

	Federal estimate			
	1973		1974	
	in Sch. million	in %	in Sch. million	in %
1. University and university-related research: (institutions of higher learning, Academy of Sciences, Fund for the Promotion of Scientific Research, higher technical teaching establishments, including scientific institutions) total	1,590.986	67.63	1,857.036	67.72
Fund for the Promotion of Scientific Research	120.625	(7.58)	127.359	(6.86)
2. Governmental research: (experimental and research institutions of the state, museums, general and ear-marked funds for research in the interest of the Ministry) total	304.611	12.95	341.336	12.45
a) intramural expenditure	230.435	(75.65)	266.066	(77.95)
- technical experimental and research establishments	84.099	((36.50))	91.950	((34.56))
- agricultural experimental and research establishments	69.465	((30.15))	79.528	((29.89))
- other imtramural expenditure	76.871	((33.35))	94.588	((35.55))
b) extramural expenditure	74.176	(24.35)	75.270	(22.05)

3. Research in the field of commerce, trade and industry, building (2) and road research (2), total	355.221	15.10	418.306	15.25
a) Industrial Research Promotion Fund	154.400	(43.47)	165.165	(39.48)
b) Technical experiments	9.794	(2.76)	9.794	(2.34)
c) Austrian Study Association for Nuclear Energy Ltd.(1)	88.185	(24.83)	123.739	(29.58)
d) General building and housing research	61.585	(17.34)	72.911	(17.43)
e) Road research	38.000	(10.70)	43.502	(16.40)
f) Other research (Association for Wood Research, Austrian Society for Space Research, etc.)	3.257	(0.92)	3.195	(0.76)
4. Contributions to research projects carried out by international organizations	101.862	4.33	125.584	4.58
Sum total 1-4	2,352.650	100.00	2,742.262	100.00

Table 2: R & D expenditure in higher education: by types of expenditure and areas

SUMMARY: UNIVERSITIES, ART SCHOOLS, ACADEMY OF SCIENCES (1), EXPERIMENTAL ESTABLISHMENTS AT HIGHER TECHNICAL TEACHING ESTABLISHMENTS

Expenditure on research and experimental development in 1970 by taking into consideration the overhead costs and building costs: by types of expenditure and areas of higher education

Areas of higher education	Number of institutions engaged in R&D	Personnel expenditure	Current material expenditure including overhead costs	Expenditure on investments for equipment	Building costs and expenditure on real estate	Total
		in Sch. thousand				
Universities2)	656	313,350	212,744	63,825	137,620	727,539
university hospitals3)	46	52,143	61,383	3,742	36,897	154,165
Art schools	20	2,979	1,283	-	396	4,648
Experimental establishments at higher technical teaching establishments	13	3,772	674	1,455	134	6,035
Academy of Sciences	27	8,181	3,883	8,083	1,520	21,667
Total2)	716	328,282	218,584	73,363	139,660	759,889

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(1) No complete survey. R&D share in expenditure estimated
(2) Including university hospitals
(3) Not investigated. R&D share in expenditure estimated

Source: Austrian Central Office of Statistics

Thus, in 1974, a total of Sch. 2,200 million was spent in Austria on science-related research, i.e., about 34 percent of Austria's overal R&D expenditure.

In 1974, 93 percent of this expenditure on science-related research was financed by the Federal Government. According to the latest investigation by the Austrian Central Office of Statistics into higher education (1), about Sch. 760 million were spent on research and development at institutions of higher learning in 1970. This overall figure was broken down into 43.2 percent on personnel costs, 28.8 percent on other current material costs, 9.6 percent on investments for equipment, and 18.4 percent on building costs and acquisition of real estate or premises (Table 2). This statistical investigation also reveals that in 1970 the total R&D expendpiture in higher education was broken down as follows: 25.8 percent on natural sciences, 16.4 percent on technology, 32.2 percent on medicine, 4.6 percent on agriculture, 8.7 percent on social sciences, and 12.3 percent on the humanities (Table 3).

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(1) Research at institutions of higher learning is to be understood here in a narrower sense than science-related research, the latter comprising research at universities, art schools, the Academy of Sciences, and the advanced training and experimental establishments.

Table 3: R & D expenditure in higher education 1970: by types of expenditure and areas of science

SUMMARY: UNIVERSITIES, ART SCHOOLS, ACADEMY OF SCIENCES[1], EXPERIMENTAL ESTABLISHMENTS AT HIGHER TECHNICAL TEACHING ESTABLISHMENTS

Expenditure on research and experimental development in 1970 by taking into consideration the overhead costs and building costs: by types of expenditure and areas of science

Areas of science	Number of institutions engaged in R&D	Personnel expenditure	Current material expenditure including overhead costs	Expenditure on investments for equipment	Building costs and expenditure on real estate	Total
		in Sch. thousand				
Natural sciences	146	81,274	45,317	37,715	31,347	195,653
Technology	126	47,840	26,652	12,371	37,662	124,525
Medicine						
1. without university hospitals (2)	51	42,015	28,241	10,772	9,710	90,738
2. university hospitals (3)	46	52,143	61,383	3,742	36,897	154,165
Sum total medicine	97	94,158	89,624	14,514	46,607	244,903
Agriculture	39	18,356	8,604	3,041	5,190	35,191
Subtotal (4)	409	241,628	170,197	67,641	120,806	600,272
Social sciences	129	36,807	20,478	2,216	6,771	66,272
Humanities	179	49,847	27,909	3,506	12,083	93,345
Subtotal	308	86,654	48,387	5,722	18,854	159,617
Total (4)	716	328,282	218,584	73,363	139,660	759,889

(1) No complete survey. R&D share in expenditure estimated
(2) Departments at universities including two institutes of the Academy of Sciences
(3) Not investigated. R&D share in expenditure estimated
(4) Including university hospitals

Source: Austrian Central Office of Statistics

4.1.3 Government financing of science-related research

The Federal Government finances science-related research through

- direct allocations to institutions of higher learning as well as to organizations that carry out science-related research outside the universities (e.g., the Academy of Sciences, the Ludwig Boltzmann Association for the Promotion of Scientific Research in Austria, the Institute for Advanced Studies, etc.);
- subsidies to the Fund for the Promotion of Scientific Research;
- financial contributions to relevant research-promoting institutions;
- either financial grants or research contracts given to science-related research institutions, research teams and individual researchers;

and it promotes international cooperation in this field.

Personnel costs, other current costs and capital costs including building costs in the area of higher education are met by the Federal Government. Through the establishment of so-called university funds, the Federal Provinces or the university towns often make a contribution to the financing of universities. In addition, the Federal Provinces promote university and university-related research by supporting specific research projects and by furthering general research in the arts and sciences.

The Research Promotion Act of 1967 established two funds for the promotion of research, namely, the Fund for the Promotion of Scientific Research and the Industrial Research Promotion Fund, as well as the Austrian Research Council as a joint organ of both Funds. Under this Act the Fund for the Promotion of Scientific Research finances research projects of individual persons or groups of persons. The Austrian Research Council is composed of the board members of both Funds; it acts as an advisory body for the Federal and Provincial Governments and legislatures.

4.1.4 Legal basis

The legal nature, the organization and the execution of research and development at institutions of higher learning are regulated in the pertinent laws; under the Constitution this legislation is exclusively reversed to the National Parliament. (1)

The freedom of science is guaranteed in the Austrian Federal Constitution. (2) The encouragement of research through the Fund for the Promotion of Scientific Research as well as support for special research areas, such as housing research and road research, are regulated in special Federal acts. In the absence of special acts, the general promotion of research as well as the awarding of research contracts are based on relevant ministerial rules. (3)

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(1) Compare in particular Zaruba-Frühauf, Österreichisches Forschungsrecht, Vienna 1974; Brunner, Handbuch des Österreichischen Hochschulwesens, Vienna 1971; Ermacora, Österreichisches Hochschulrecht, loose leaf, Vienna 1972 ff; Otruba-Drischel, Handbuch der Hochschulreform, loose leaf, Vienna 1966 ff;Kneucker, Strasser, Tuppy, Die Universität als autonomes Lehr- und Forschungsunternehmen, Vienna 1968.

(2) Compare in particular Frühauf, Verfassung und Hochschulorganisation, Supplement to the Österreichische Hochschulzeitung, July 15, 1973; Otruba, Die Freiheit der Wissenschaft und ihre Realisierung, Graz 1970; Wenger-Winkler, Die Freiheit der Wissenschaft und ihre Lehre, eine verfassungsrechtliche Analyse der Bedeutung des Art.17 StGG für die Hochschulorganisation, Vienna 1974; Loebenstein, Die Freiheit der Wissenschaft und ihre Lehr in "Österreichische Juristenzeitung", Vol. 10/1974.

(3) Compare in particular Zaruba-Frühauf, Österreichisches Forschungsrecht, Vienna 1974.

4.2. OBJECTIVES OF SCIENCE-RELATED RESEARCH

Experts in the field of science, economy and administration cooperated in preparing the "Austrian Research Plan", which was adopted by the Federal Government in 1972. The Plan includes the medium- and long-term perspectives for a research policy that is oriented toward the needs of science, economy and society. (1)

The Austrian Research Plan provides an analysis of research and development in Austria, based on the qualified analysis of the OECD review of the Austrian science policy and especially on the proposals of the Advisory Council of Economic and Social Affairs. (2) The Austrian Research Plan is closely connected with the general cultural, social and economic goals of Austria's national policy. In the cultural realm the objectives are: raising the general educational level and increasing the willingness to learn; a stronger public commitment to political matters, i.e., matters that concern the general public as a whole; objective attitudes; clear judgment; honesty and tolerance; respect and understanding for minorities of any type; openmindedness toward scientific, cultural, social and economic innovations and toward reforms of the social structure; broadmindedness; an increase in the number of young scientists; and an increase in the research potential in order to guarantee top-ranking international positions in certain selected areas. In the social realm they are: national health, old-age care, equal chances and opportunities both socially and regionally; the avoidance of aggression and of alcohol and drug abuse; the peaceful settlement of unavoidable political and social conflicts and conflicts arising from the generation gap; humane and healthy working and environmental conditions.

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(1) See "Österreichische Forschungskonzeption", Bundesministerium für Wissenschaft und Forschung, Vienna 1972.

(2) See OECD, Reviews of national science policy, Austria, Paris 1971; Beirat für Wirtschafts- und Sozialfragen, Vorschläge zur Industriepolitik, Vienna 1970.

In the economic field the objectives are:
the further development of economic productivity, the promotion of economic growth, full-employment, price stability, an increased standard of living, a sound balance of payments, the development of new improved and less expensive processes, materials, sources of energy, products, instruments and systems; increased labour and capital productivity; a higher quality of goods and services.

According to the Austrian Research Plan, science-related research should primarily serve the further development of science. It constitutes the basis for access to new knowledge, for scientific teaching and learning and for the process of innovation. Science-related research is to provide impulses for economy-related research, and vice versa. No field should be completely neglected by science-related research, yet the scarcity of funds available in Austria neccesitates a concentration on some clearly defined areas for which there is justified hope of reaching and maintaining top international ranks. As an essential prerequisite for success such areas should be selected by outstanding researchers and the schools or research teams established by them. The process of scientific research is closely connected with that of scientific training and education. Research policy and educational policy must be geared to each other. Research fertilizes teaching and learning; indeed it should be research that determines what is to be taught. The desire to engage in research should be already stimulated at the elementary and secondary schooling levels.

Under the Austrian Research Plan it is primarily the universities that are in charge of science-related research. They need an inspiring academic atmosphere that furthers intellectual contacts and constructive competition among colleagues in order to guarantee a free development of creative research.

It is the task of the universities to deeply penetrate into the scientific problems and questions, to teach the subject matter and the methodical bases of science, to employ research toward a better understanding of the problems, and to facilitate solutions for them by stimulating interdisciplinary communication. The extent to which this can be achieved will determine the scientific value and the originality of the projects and their solutions.

The Austrian Research Plan stipulates that the universities should not only be concerned with basic research and teaching per se, but should, in addition, engage in specific scientific teaching and research and exemplary activities; otherwise scientific training at the universities would be incomplete. Unless at least a certain percentage of the academic staff and of advanced students engages in applied research, the scientific potential of the universities would not be fully utilized. This holds true for the social sciences, the humanities as well as for natural sciences, engineering sciences, biology and medicine. In addition, the university must prepare those students who will not remain within the field of scientific research - and that is the overwhelming majority - for the practical aspects of their future professions.

The Austrian Research Plan emphasizes the central role of university research within the system of research as a whole; it forms the basis of the latter and supplies the necessary impulses. At the same time, it receives valuable new ideas and knowledge from the overall research system. Furthermore, the universities, through their members and research facilities, render valuable services to the state, industry and society by carrying out sponsored research projects, by giving expert opinions, by preparing studies and documentations, etc. Planning schemes for higher education must take these service functions of the universities into consideration.

The provision of personnel, space and equipment at the universities is one of the most important and urgent tasks of the Federal Government; the funds for current research expenditure (and the usual administrative expenditure) must be secured through regular and adequate allocations. This is the only way to guarantee a proper training and education for students, graduates and young scientists, and to retain a teaching staff that is particularly qualified for research. The ratio between scientific and non-scientific personnel and material expenses must be geared to the respective needs and requirements.

The adequate financing of basic requirements is necessary for that area of university research that is directly connected with teaching by law. Adequate basic requirements in terms of equipment and funds will have to be determined by surveys in every individual case and must then be standardized. Since the law provides for a combination of research and teaching, a certain minimum amount of research must be carried out in every subject area. Thus, at the university special priorities can be set up only in those areas of research that go beyond the research connected with teaching.

While universities combine teaching and research, other scientific institutions devote themselves primarily or exclusively to research.

Within the framework of the Austrian Research Plan the Academy of Sciences has a legally founded research function; it operates on a national and multidisciplinary basis. The activities and cooperation of the Academy in numerous international projects and programmes prove to be a considerable asset in the treatment of scientific questions. A great number of scientists, ranging from young postgraduates to university professors emeriti, cooperate in the numerous institutes and commissions of the Academy, and help to carry out the research programmes in the natural sciences, the humanities and the social sciences. A diversification of fields and an intensification of research activities should be the goal. (1)

Besides the universities and the Academy of Sciences, there exist many other research institutions, in particular the Ludwig Boltzmann Association, the Austrian Institute for Economic Research, and the Institute for Advanced Studies and Scientific Research. There should be close coordination between these research establishments, the universities and the institutions engaged in economy-related research. Some of the above mentioned institutions have changed their programmes in the course of time; they should more than ever before align their projects to the needs of economy-related research. (2)

According to the Austrian Research Plan, all these research institutions, particularly the universities, should adopt a more efficient management. Usually this would call for changes in organization and personnel, because the administration will have to be expanded and often restructured. Qualified personnel and new technical facilities (above all EDP installations) are needed to make the administration more economical and more efficient.

The Austrian Research Plan demands that universities and other research centres be increasingly enabled to also engage in long-term research priorities (special research); special modes of financing will be provided.

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(1) Compare in particular: Österreichische Akademie der Wissenschaften, Forschungsprogramm 1972-76, Vienna 1972.

(2) Compare in particular the goals of the medium-term research programme of the Ludwig Boltzmann Association for the Promotion of Scientific Research in Austria in the annual report 1973 of the Association, Vienna 1974.

The main criteria for long-term research projects are

- their scientific significance, their originality and the expected results for Austria or the impact beyond the Austrian borders;
- personnel and/or material expenses, which often far exceed those for the basic equipment and facilities (for teaching and research);
- possibilities for cooperation of several scientists or institutes;
- the guarantee of continued research activities;
- competitiveness with corresponding foreign institutions.

The high costs involved necessitate very strict selection criteria for research priorities.

The current research grants to universities and other research institutions as well as the promotion of long-term research projects at these institutions must be seperated from the promotion of short- and medium-term projects of individual researchers or teams of researchers. The latter lies in the hands of individual persons, who are connected with all various scientific institutions and research centres. Their work paves the way for long-term research projects to be carried out by individual institutes. Such research projects constitute important elements in the overall research process. Their promotion also provides an incentive for young, aspiring or particularly productive researchers to develop and execute new research ideas. This is the reason why a number of scientific institutions support this medium range, thereby making a valuable contribution to research in general. Also the promotion - last,but not least through the Federal Ministry of Science and Research itself - of individual scientific activities and publications under the auspices of associations and societies, such as those that are united within the Union of Austrian Scientific Societies, falls under this heading. All these projects call for and justify appropriate government support.

The Fund for the Promotion of Scientific Research has the main responsibility for the promotion of individual or project research (including rather expensive undertakings) (1). In this respect, the Austrian Research Plan must urge for the fulfillment of the stipulations under the Research Promotion Act, and also for the selection and setting of priorities. (2) One of the main concerns of science-related research policy is the intensification of international cooperation, which - for reasons of the costs involved - must meet the demands and needs of society and must (particularly in a small country like Austria) supplement the national research efforts. (3)

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(1) Compare in particular the annual reports of the Fonds zur Förderung der wissenschaftlichen Forschung to the Federal Ministry of Science and Research.

(2) Compare in particular the chapter on science-related research of the Austrian Research Concept.

(3) Compare in particular H.Firnberg, Wissenschaftspolitik und internationale Zusammenarbeit, in "Europäische Rundschau", vol.Nr. 1/1974.

4.3. RESEARCH POLICY INSTRUMENTS FOR THE EXECUTION OF THE GOALS OF THE AUSTRIAN RESEARCH PLAN

Consultation and coordination instruments are at the disposal of the Federal Minister of Science and Research for the execution of the Austrian Research Plan. In 1971, the Science Forum was created for national questions of research policy. It serves as a personal advisory body to the Federal Minister of Science and Research. Under the Research Promotion Act, the Austrian Research Council acts as a consultative organ to the legislative bodies, to the Federal and Provincial Government, and to the Federal ministries. For special tasks, such as for the elaboration of the Austrian Research Plan as well as for sectoral schemes, the Federal Minister of Science and Research sets up project teams, i.e., groups of experts composed of representatives of science, the economy and the administration.

Under University Organization Act, the Austrian Conference of University Rectors as well as the Academic Council have consultative functions in matters of higher education.

In addition, there are special expert committees, such as the Expert Committee for Electronic Data Processing within the Scientific-Academic Sector.

An Inter-ministerial Research Coordination Committee is responsible for the coordination of research matters among the ministries.

Major institutions that promote or carry out research, e.g., the Austrian Academy of Sciences and the two Research Promotion Funds, also exercise consultative functions in their fields.

4.4 EXECUTION OF THE GOALS OF THE AUSTRIAN RESEARCH PLAN

For the realization of the Austrian Research Plan a catalogue of operational research policy measures was compiled. (1) The catalogue lists measures for the planning and coordination of governmental research promotion and for the sectoral R&D promotion.

For essential areas of the infrastructure, such as the application of EDP installations in science-related research, separate concepts have been elaborated; the same applies to the major research institutions outside the universities. (2)

For socio-politically relevant cross-sectional areas, such as research into eco-systems or energy research, special groups of experts were instituted in order to prepare the respective research concepts.

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(1) Catalogue of operational measures in the field of research policy, Bundesministerium für Wissenschaft und Forschung, Vienna 1972.

(2) Compare in particular the 1971-1974 Reports of the Federal Government to the Nationalrat; the working reports of the Bundesministerium für Wissenschaft und Forschung; the plan for geo-scientific and geotechnical research in Austria; electronic-data processing in the scientific-academic field, etc.

The availability of information in the area of research is guaranteed by adequate documentation and the systemization and continuity of information processing[1].

The government draft of a new University Organization Act provides for the necessary legal framework for efficient university research with due consideration of the needs of research policy.

It has been possible to intensify international cooperation and to essentially improve the financial situation for science-related research. In 1974, the total Federal expenditure on research and development had increased by about 83 percent over that of 1970. Its share in the overall Federal expenditure was raised from 1.36 percent in 1970 to 1.72 percent in 1974.

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(1) See in particular: Österreichischer Forschungsstättenkatalog, Vienna 1971; Forschungsfinanzierungsaktionen, Vienna 1972, Hochschulplanungsrechnung, Vienna 1973, etc.

5. DEMAND FOR UNIVERSITY GRADUATES

5. DEMAND FOR UNIVERSITY GRADUATES

In the sixties the recognition of the importance of education and science for a country's economic development initiated an expansive educational policy. The new policy led to an increasing demand for education, yet only since the beginning of the seventies has this demand become noticeable at the university level. As a consequence of the educational expansion the demand for labour market-oriented university planning has often changed considerably. The sixties were characterized by a growing need for university graduates; the seventies, however, show a more restrictive perspective, a tendency to limit the "production of university graduates".

In recent years a number of Western industrialized countries have reported increasing unemployment rates among university graduates. The most common types of unemployment are:
a) University graduates do not easily find employment after completion of their studies; b) Highly qualified specialists are dismissed on account of the slow-down of the economic boom.

In view of the rising number of students in Austria and the experiences of some foreign countries, Austrians have become crisis-conscious and discussions concerning the demand for university graduates have been resumed.
Despite the lack of empirical data it has become customary in Austria as well to speak of a pending unemployment crisis of university graduates. This fear of unemployment is closely linked to the fear of proletarianization of universit graduates, which might lead to political instability.

A number of actual or alleged problems of university education must also be considered in this context, such as the "mass university", "capacity bottlenecks", and the "deterioration of educational standards".

It is clear that the actual or dreaded increase in the output of the universities has given rise to such apprehensions. Similar situations have occurred several times in the history of the universities.

The threat of unemployment among university graduates and the capacity bottlenecks are invoked under the pretext of safeguarding the interests of society, although they often only serve the interests of individual social groups.

The anticipated proletarianization of university graduates seems to mobilize mainly those groups of the population that feel directly threatened.

However, it must also be clear that the assessment of the demand for university graduates on the basis of individual interests can have only limited validity for planning activities that have to secure the interests of society as a whole.

The labour market can obviously absorb only a limited number of university graduates of the traditional type. However, there are no indications in Austria that an overproduction of university graduates is to be expected in the near future. The question of the demand for university graduates must be reconsidered in the light of the latest developments and findings in educational economics.

At any rate restricting education should be avoided at a point where it is not necessary.

International experiences have revealed two types of unemployment among university graduates:

Open unemployment: The term applies when a large number of university graduates are unemployed. Open unemployment occurs most frequently with graduates who cannot find work after completion of their studies, e.g., in Sweden, Italy, and recently also in the Federal Republic of Germany. Unemployment on account of dismissal or change of occupation occurs less frequently.

Hidden unemployment is caused by:

- over-qualification;
- employment in occupations that are not related to the academic training and education;
- continuation of studies despite the completion of a study programme.

The unemployment among unversity graduates is a consequence of the supply and demand situation.

International literature shows some attempts to explain the phenomenon of unemployment among university graduates; systematic analyses and complex theoretical investigations, however, are lacking almost altogether.

The unemployment among unversity graduates is explained among others:

- as a temporary phenomenon caused by cyclical fluctuations;
- as one aspect of juvenile unemployment;
- as a consequence of insufficient planning and the fact that any labour market-oriented planning of educational institutions is extremely difficult.

In addition, it is maintained that

- the study programmes at the institutions of higher learning are not sufficiently practice-oriented;
- the expectations of the university graduates do not correspond with the conditions on the labour market; their actual jobs do not accord the status they expected;
- unemployment is the result of complex social and economic developments. The demand for highly qualified specialists changes with the technological development of production and can no longer be met by the institutions of higher learning.

In this context the question arises if this overproduction is not - at least to some extent - due to a misdirected production. Below are some potential aspects of misdirected production:

- In spite of the long duration of studies, graduates have to undergo fairly extensive practical on-the-job training.
- Generally speaking, the academic education is not sufficiently practice-oriented.
- Graduates have unrealistic expectations regarding their future status.
- The necessity of adaptation often hinders the development of an independent and responsible working attitude.
- Social disintegration of small groups of students.

In general we can say that the usefulness of the academic education of the university graduate for the labour market is essentially determined by the structure and the quality of the university education. Therefore, the study reform is of decisive importance.

The experiences gained in other countries show that high unemployment rates of unversity graduates occur mainly in countries with very high numbers of students and graduates. The unemployment is usually a temporary phenomenon.

Since September 1973 the Federal Ministry of Social Administration has carried out special surveys on officially recorded unemployed university graduates. The figures obtained are not a true reflection of the actual situation as university graduates do not like to contact labour exchanges and because the most recent graduates are not included. They do, however, provide some information for the assessment of the general situation on the labour market for university graduates. It has been noted in other countries that once a certain critical limit is exceeded, even university graduates turn to the labour exchanges.

According to the unemployment statistics of the Federal Ministry of Social Administration, 124 university graduates were recorded as unemployed in Austria on 20 September 1974.

Table 1: Unemployed unversity graduates recorded at the labour exchanges (1)

	Number	
	total	of limited employability
20 September 1973	81	54
21 January 1974	138	83
20 September 1974	124	49

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(1) The above table includes only those unemployed graduate who have had work before. Statistics on unversity graduates who want to find employment immediately after completion of their studies are not available.

The extremely low number of graduates recorded and the fact that two thirds of them are classified as being of limited employability indicate that there is no genuine unemployment among unversity graduates in Austria.

Below some basic data for a rational assessment of the problem "Demand for university graduates in Austria".

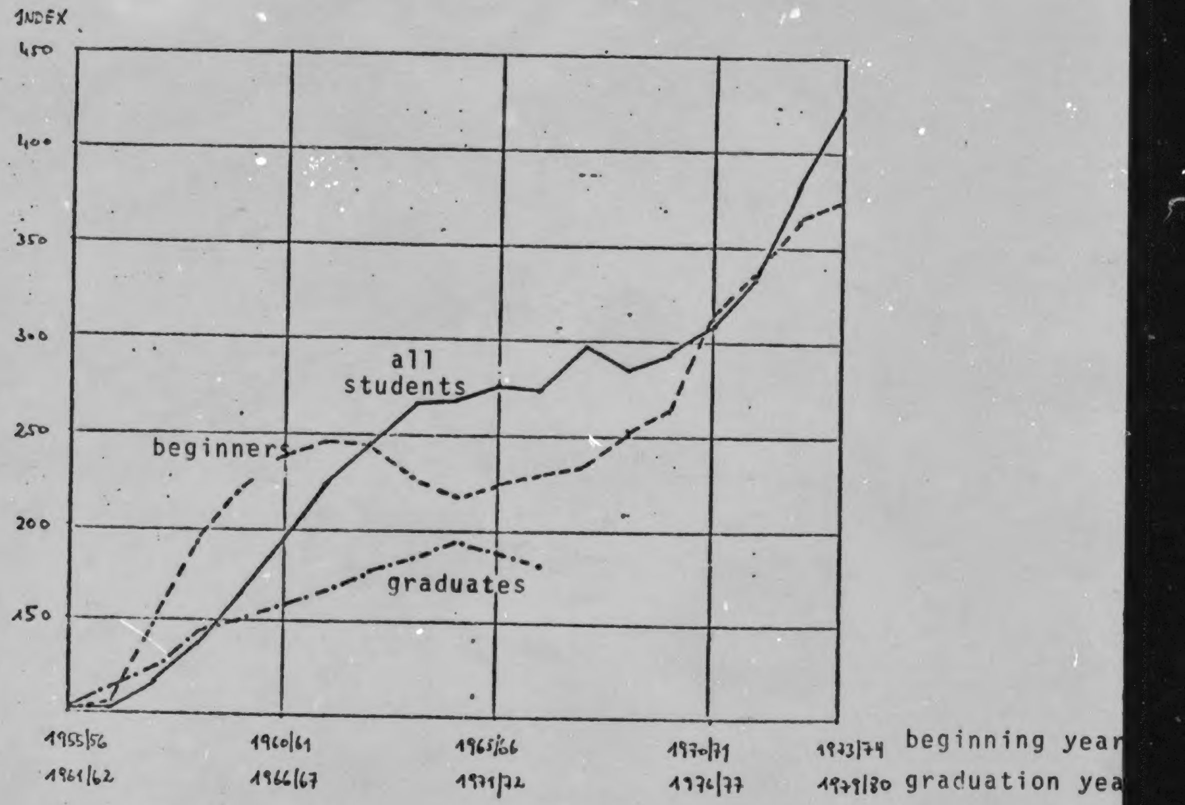
5.1 CRITICAL ASSESSMENT OF THE INCREASE IN THE NUMBER OF STUDENTS

The substantial increase in the number of students, revealed in the students' statistics, calls for a critical review. It has already been pointed out (2.2.3) that an increasing number of students are not planning to complete their studies, i.e., a minimum of 10 percent of the total student population. A considerable part of the rise in the number of students is due to the above-average increase in the number of re-registrations (students in second and higher semesters). In a few mass subjects the duration of studies is often prolonged (see 2.5.1).

The increase in the number of students registering for the first time must be seen from different angles. The number of male students registering for the first time is slightly decreasing. Since the winter semester 1970/71 the higher number of students registering for the first time has only been due to the rise in the number of female students registering for the first time. The annual rates of increase have gone down since the winter semester 1969/70; the number of students registering for the first time increased by 23 percent between 1969/70 and 70/71. The rate of increase has since declined to 2 percent.

The highest rises are reported from the study programmes and subjects of the Faculty of Arts and Sciences and the Faculty of Medicine.

Graph 1: Numbers of students, beginners and graduates (since winter semester 1955/56)



When looking at the number of students registering for the first time, the total number of students, and the number of graduates six years after the beginning of studies, we see that the substantial increase in the number of beginners does not lead to a corresponding increase in the number of graduates.

On the contrary, the number of university graduates today is lower than in 1970/71. Since the end of the sixties the number of graduates has remained constant.

Due to the rising number of students the share of students in the resident population has increased. In 1967/68 there were 51 students per 1,000 persons aged 18-26 years; in 1969/70 and 1973/74 the figures were 52 and 72, respectively.

This increase since 1966 has been mainly due to the above-average rise in the number of female students and the expansion of the regional feeding areas. The number of female students has almost doubled since 1966/67, whereas that of male students has risen by only one third. With the exception of Vorarlberg student rates have risen particularly in those Provinces which had the lowest student rates in 1967/68.

Table 1: Student rates since winter semester 1955/56, Austrian regular degree students at universities

	Share of students in the resident population aged 18 to under 26		
winter semester	male	female	total
1955/56	3.2	0.8	2.0
1956/57	3.3	0.9	2.1
1957/58	3.4	1.1	2.3
1958/59	3.7	1.3	2.5
1959/60	4.1	1.5	2.9
1960/61	4.9	1.7	3.3
1961/62	5.3	1.9	3.6
1962/63	5.7	2.1	3.9
1963/64	6.1	2.1	4.2
1964/65	6.3	2.1	4.2
1965/66	6.5	2.2	4.4
1966/67	6.7	2.4	4.5
1967/68	7.5	2.6	5.1
1968/69	7.3	2.5	4.9
1969/70	7.5	2.6	5.1
1970/71	8.0	2.8	5.4
1971/72	8.4	3.2	5.8
1972/73	8.9	3.8	6.4
1973/74	9.6	4.5	7.1

At the end of the sixties there were about 52 students per 1,000 men and women of the resident population of the same age groups. A comparison with more than 30 European and other countries shows that Austria as well as the Federal Republic of Germany and Switzerland are among the countries with the lowest student rates. Austria ranks within the bott third of the list. (1)

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(1) UNESCO, Statistical Yearbook, Paris 1969, 1971

Today the student rate in Austria is considerably lower than that in the Federal Republic of Germany and somewhat higher than that in Switzerland; in Sweden the student rate is about 50 percent higher than in Austria.

Table 2: International comparison of student numbers in the academic years 1970/71 and 1973/74

The share of university students in the resident population (same age groups) per 1,000 persons is as follows:

	1970/71	1973/74
Austria +)	64	87
Sweden (1) +)	137	121
Federal Republic of Germany (2)(4) +)	84	102
Switzerland (3) ++)	52	62

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(1) Office of the Chancellor of the Swedish Universities: Swedish higher education, some facts, Stockholm 1974

Statistiks Årsbok för Sverige, Årgång 59, 1972, Stockholm

(2) Statistisches Jahrbuch für die Bundesrepublik Deutschland 1973, Statistisches Bundesamt Wiesbaden 1973

Bundesminister für Bildung und Wissenschaft (Pressereferat), Nachrichten, 1974 (February)

(3) Eidgenössisches Statistisches Amt, Die Studierenden an den Schweizerischen Hochschulen, Wintersemester 1972/73, Bern 1974, p. 14,15

(4) Without students at the specialized institutions of higher learning

+) 100% = resident population aged 19 to under 26 years
++) 100% = resident population aged 20 to under 27 years

5.2 DEMOGRAPHIC SITUATION

The 1971 census showed that there were 120,727 graduates of the post-secondary field in Austria at that time. Nearly all of them are university graduates. As a consequence of the expansion of the non-university post-secondary field after 1962 there also exist a small number of graduates of academies and related teaching establishments.

Table 1: Graduates of the post-secondary realm (1971 census

Graduation from	male	female	total
Universities	85,406	24,009	109,415
Art schools	5,018	3,861	8,879
Related teaching establishments	891	1,542	2,433
Total	91,315	29,412	120,727

Of the 118,294 graduates from universities and art schools 29,412 graduates are women, i.e., 24 percent of all graduates. The largest groups of graduates come from the Faculties of Arts and Sciences, Law and Medicine and the technical universities.

Compared to the 1951 census the number of university graduates has risen by 31 percent; this rise was most pronounced between 1961 and 1971. The rate of increase in the number of university graduates is slightly higher than that of secondary-school graduates (about 27 percent). Compared to 1951, the absolute number of male university graduates has increased by about 28,000; that of female university graduates by about 14,000. However, the relative rise in the number of female university graduates is much higher than that of male university graduates.

While the number of female university graduates has more than doubled since 1951 (particularly between 1961 and 1971), the number of male graduates has increased by a mere 17 percent.

Table 2: Graduates from universities and art schools (1971, 1961 and 1951 censuses)

	male	female	total	in % of resident population, 15 years or older	in % of resident population, 25 years or older
1951	76,996	13,575	90,571	1.7	x (1)
1961	82,403	19,044	101,447	1.8	2.3
1971	90,424	27,870	118,294	2.1	2.6

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(1) Not available

The increase in the number of university graduates was considerably higher than that of the resident population. Thus, between 1961 and 1971 the number of university graduates rose by almost one fifth, while the resident population increased only by five percent.

Therefore, the percentage of university graduates - the share of university graduates in the resident population - increased as well. In 1961 2.3 percent of the resident population aged 24 or above were university graduates; in 1971 the percentage was 2.6.

An international comparison shows that the rate of university graduates is still relatively low in Austria.

Table 3: Share of university graduates in the population aged over 25 years (1970/71) in selected countries

Austria	2.6
Federal Republic of Germany (1)(2)	3.2
Sweden (3)	3.6

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(1) Statistisches Jahrbuch für die Bundesrepublik Deutschland, Statistisches Bundesamt Wiesbaden 1973, Bundesminister für Bildung und Wissenschaft (Pressereferat), Nachrichten, 1974 (February)

(2) Not including graduates of specialized institutions of higher learning

(3) Statistik Årsbok för Sverige, Årgång 58, 1971, Stockholm Statistika Meddelanden 1973, Nr. 13, Population and housing census in 1970 Education

Without the graduates of art schools the percentage of university graduates is 2.4.

All these comparisons do not take into consideration structural differences in the educational systems.

It is obvious that the educational expansion of the past decades primarily affects the education of the younger generation rather than the educational structure of the entire population. The share of university graduates in the population aged 25 to under 30 (1971) was 3.3 percent.

Table 4: Share of graduates of the post-secondary realm in individual age groups (1971 census)

	25 to under 30 years	30 to under 35 years	35 to under 40 years
Universities	3.3	3.1	2.3
Related teaching establishments	0.1	0.1	.
Total	3.4	3.2	2.4

5.3 DEMAND ESTIMATES

The 1972 University Report criticized the present demand estimates of university graduates (1) and discussed the manpower requirements. (2)

In the past few years some minor investigations have been made including quantitative data on the "demand" for university graduates in certain fields. (3)

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1) The publications concerned are: Steindl J., Der Bedarf an Fachkräften in: Bildungsplanung in Österreich, vol. I, Erziehungsplanung und Wirtschaftswachstum 1965 bis 1975, published by the Federal Ministry of Education, Vienna-Munich 1967 (I.OECD-Bildungsbericht). Seidel H., Der Bedarf an Akademikern bis 1980;manuscript, Federal Ministry of Education, Vienna 1969. Clement W. and Lukesch D., Ökonomische Aspekte des sozial- und wirtschaftswissenschaftlichen Studiums in Österreich; manuscript, Federal Ministry of Education, Vienna 1969. Schober B., Medizinstudium und Ärztebedarf in Österreich, Vienna 1971.

(2) The representation included in the University Report is based on a paper prepared by Clement W. for the Federal Ministry of Science and Research

(3) Wirtschaftsförderungsinstitut der Bundeskammer der gewerblichen Wirtschaft, Absolventenbedarf in Gewerbe, Industrie,Verkehr,Fremdenverkehr,Geld-,Kredit-u.Versicherungswesen, Vienna 1972. Schober B., Medizinstudium und Ärztebedarf in Österreich, Vienna 1971; Dokumentation der Österreichischen Ärztekammer zur ärztlichen Versorgung Österreichs, Vienna 1974; Bundesministerium für Unterricht und Kunst, Schätzung des Lehrerbedarfs 1971-1980, mimeographed working paper, Vienna 1971.

The demand estimates are for graduates of those study programmes which - in absolute terms - have the largest increase in student numbers at Austrian uniersities: arts and sciences, medicine,and economics and social sciences.

These investigations show that there will be no surplus of university graduates - at least not in the next few years.

According to a 1972 survey of the Institute for Economic Promotion of the Federal Chamber of Commerce, Trade and Industry, there was a shortage of 1,600 university graduates in the fields of trade, industry, traffic and transport, tourist trade, banking and insurance. This shortage involves mainly graduates from study programmes of technology, natural sciences (62 percent) and economics.

The additional demand up to 1977 is 30 percent of the year 1972 (11,739), i.e., plus 5.8 percent per year. Of course, this comprises only part of the total demand for graduates of these study programmes in the economy and particularly otherwise.

According to a survey by Bruno Schober ("Medizinstudium und Ärztebedarf in Österreich"), there will be no surplus of physicians until 1980. This has been confirmed recently by an investigation of the Austrian Chamber of Physicians on the medical services and by an estimate of the future number of graduates in medicine.

The Federal Ministry of Education and Art made an estimate of the demand for teachers for the period 1971 to 1980. According to this estimate at least 18,390 examinations for secondary-school teaching qualifications must be taken - involving about 9,200 graduates - in order to meet the predicted demand.

This requires a considerable increase in the universities' output of teachers. A comparison of the actually passed examinations for secondary-school teaching qualifications in the period 1969/70 to 1973/74 with the actual demand reveals already a shortage during this period.

In all these cases regional factors and aspects pertaining to the specific fields have to be taken into consideration.

A research programme of the Federal Ministry of Science and Research on the problem of the "Demand for university graduates" will soon be completed. Changes in the educational economics, above all problems of the practical use of university education and the social and political implications of "mass studies" will be dealt with. Sponsored research will be undertaken on a larger scale.

6. BUDGET

6. BUDGET

6.1 OVERVIEW

From 1970 to 1974 the budget for the institutions of higher learning nearly doubled. Compared to the 1970 budget estimate (1) the Federal expenditure for institutions of higher learning increased by a total of 84 percent, expenditure for said institutions including the promotion of science and research by 95 percent. The entire budget (including building activities and promotion of research) amounted to Sch. 4,300 million in 1974. The increase in expenditure for institutions of higher learning is much higher than that in Federal expenditure as a whole; it reflects the priority given to tertiary education and science.

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(1) In the following, budget increases will always be related to 1970. In 1970, the Federal Ministry of Science and Research was founded. Comparisons with previous years are possible only to a certain extent as the funds for the institutions of higher learning came from the overall education budget. It is difficult to define certain concepts and assign individual budget items (see University Report 1969).

Table I: Federal budget, GNP and budget for the institutions of higher learning: Federal estimates 1970-1974

	1970	1971	1972	1973	1974
Federal budget (1), total in Sch. 1,000 million	101.293	110.745	122.850	139.072	159.444
GNP (2), nominal in Sch. 1,000 million	372.2	415.8	476.6	546.3	621.6
Budget for institutions of higher learning including building costs and university-related promotion of science and research, in Sch. million	2,426.729	2,770.208	3,353.441	3,949.936	4,727.418
Budget for institutions of higher learning including building costs and university-related promotion of science and research (3), in % of the Federal budget	2.40	2.50	2.73	2.84	2.97
Budget for institutions of higher learning including building costs and university-related promotion of science and research (3), in % of GNP	0.65	0.67	0.70	0.71	0.76
Budget for institutions of higher learning including university-related promotion of science and research (3) without building costs, in Sch. million	2,105.729	2,420.187	2,957.341	3,566.436	4,343.918
Budget for institutions of higher learning including university-related promotion of science and research (3), in % of the Federal budget	2.08	2.19	2.42	2.56	2.72
Budget for institutions of higher learning including university-related promotion of science and research (3), in % of GNP	0.57	0.58	0.62	0.65	0.70
Budget for institutions of higher learning including building costs without university-related promotion of science and research (3), in Sch. million	2,301.511	2,559.666	3,062.072	3,600.532	4,241.781
Budget for institutions of higher learning including building costs without university-related promotion of science and research (3), in % of the Federal budget	2.27	2.31	2.49	2.60	2.66
Budget for institutions of higher learning including building costs without university-related promotion of science and research (3), in % of GNP	0.62	0.62	0.64	0.65	0.68
Budget for institutions of higher learning without building costs and without university-related promotion of science and research (3), in Sch. million	1,980.511	2,209.645	2,683.972	3,226.032	3,858.281
Budget for institutions of higher learning without building costs and without university-related promotion of science and research (3), in % of the Federal budget	1.96	2.00	2.18	2.32	2.42
Budget for institutions of higher learning without building costs and without university-related promotion of science and research (3), in % of GNP	0.53	0.53	0.56	0.58	0.62

(1) Regular and extraordinary budget without cyclical equalization estimate
(2) 1969-1974 according to Institute of Economic Research
(3) Outside the direct budget for institutions of higher learning

The share of the expenditure for institutions of higher learning in the GNP rose from 0.62 percent in 1970 to 0.68 percent in 1974; the share of the budget for said institutions in the Federal budget increased from 2.27 percent to 2.66 percent (respective estimates). If expenditure on university-related promotion of science and research is also considered, we see that the share of this expenditure in the GNP rose from 0.65 percent in 1970 to 0.76 percent in 1974 and the share in Federal expenditure from 2.40 percent to 2.97 percent.

Thus, the material prerequisites for a university reform oriented toward the needs of society and science have been met.

6.2 BREAK-DOWN OF EXPENDITURE

The "budget for institutions of higher learning" has been defined institutionally. It is based on the expenditure on university facilities, degree-granting institutions of higher learning and art schools. The building costs, which form part of the budget of the Federal Ministry of Construction and Technology, and the expenditure on study and university libraries are included. Moreover, the Federal Ministry of Science and Research provides funds for the promotion of science and research outside the institutions of higher learning. These activities directly or indirectly influence the work at these institutions and are thus included here. These funds are used for

- the Fund for the Promotion of Scientific Research, the means of which flow almost exclusively into university research;
- institutions which have some connections with the universities, such as the Austrian Academy of Sciences and its institutes;

- international scientific cooperation, above all, the Austrian contribution to CERN;
- a Federal contribution to the Austrian Study Association for Nuclear Energy Ltd.;
- contributions to the Ludwig Boltzmann Foundation for the Promotion of Scientific Research, the Institute for Advanced Studies and Scientific Research, the Vienna Academy of Medicine, etc.; and
- experts opinions and sponsored research of the Federal Ministry of Science and Research.

The major part of the budget for institutions of higher learning (about 90 percent) is spent directly on the universities and the art schools; the remainder goes toward study and university libraries and other university facilities.

39 percent of the budget is spent on personnel, 43 percent are material expenses; building costs amount to 8 percent. Since 1970 the personnel expenditure has decreased while material expenses have gone up.

Table 1: The budgets for institutions of higher learning 1970-1974 in Sch. million: Federal budget estimates

	1970	1971	1972	1973	1974
Personnel expenditure (1) in Sch. million	963.349	1,096.200	1,297.55	1,576.393	1,836.032
Increase over previous year, in %	8.3	13.8	18.4	21.5	16.5
Material expenses (2), in Sch. million	1,017.162	1,113.445	1,386.417	1,649.639	2,022.249
Increase over previous year, in %	20.3	9.5	24.5	19.0	22.6
Building costs (3), in Sch. million	321.000	350.021	378.100	383.500	383.500
Increase over previous year, in %	37.7	9.0	8.0	1.4	0.0
University-related promotion of science and research (4), in Sch. million	125.218	210.542	291.369	340.404	485.637
Increase over previous year, in %	- 9.7	68.1	38.4	16.8	42.7
Total	2,426.729	2,770.208	3,353.441	3,949.936	4,727.418
Increase over previous year, in %	15.2	14.2	21.1	17.8	19.7

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(1) Personnel expenditure: 14200, 14210, 14300, 14310, 14230 without the National Library

(2) Material expenses: 1410, 14201, 14203, 14207, 14208 minus 4020/009 and 7280/001, 14211, 14213, 14216, 14217, 14218, 14301, 14303, 14306, 14307, 14308, 14311, 14316, 14317, 14318, 14231 without the National Library, 14233 without the National Library, 14238 without the National Library

(3) Building costs: 1/64718-6145, 5/64713-0636, 5/61813-0636.

(4) University-related promotion of science and research: 1411, 1412, 1413, 1414, 1416, 1417, 1418, 1419 and the items 14208/4020-009 and 7280-001, 14227-7801 and 7802, 14228-7341. Amounts budgeted by the Federal Ministry of Finance for the Austrian Study Association for Nuclear Energy Ltd. are not considered.

Table 2: University-related promotion of science and research (1), break-down of expenditure

Federal budget estimates, in Sch. million

	1970	1971	1972	1973	1974	
1. Fund for the Promotion of Scientific Research	45.000	74.000	99.000	120.625	127.359	
Increase over 1970, in %		+ 64.4	+ 120.0	+ 168.1	+ 183.0	
Increase over previous year, in %		+ 64.4	+ 33.8	+ 21.8	+ 5.6	
2. Austrian Academy of Sciences and its institutes	21.804	30.169	49.667	62.757	71.426	
Increase over 1970, in %		+ 38.4	+ 127.8	+ 187.8	+ 227.6	
Increase over previous year, in %		+ 38.4	+ 64.6	+ 26.4	+ 13.8	
3. Contribution to CERN	25.000	44.690	65.330	71.134	92.000	
Increase over 1970, in %		+ 78.8	+ 161.3	+ 184.5	+ 268.0	
Increase over previous year, in %		+ 78.8	+ 46.2	+ 8.9	+ 29.3	
4. Miscellaneous (Austrian Study Association for Nuclear Energy Ltd., Ludwig Boltzmann Foundation, etc.)	33.414	61.683	77.372	85.888	194.852	2)
Increase over 1970, in %		+ 84.6	+ 131.6	+ 157.0	+ 483.1	2)
Increase over previous year, in %		+ 84.6	+ 25.4	+ 11.0	+ 126.9	2)
5. Total	125.218	210.542	291.369	340.404	485.637	2)
Increase over 1970, in %		+ 68.1	+ 132.7	+ 171.8	+ 287.8	2)
Increase over previous year, in %		+ 68.1	+ 38.4	+ 16.8	+ 42.7	2)

(1) Estimates 1411, 1412, 1413, 1414, 1416, 1417, 1418 and items 14208/4020-009 and 7280-001, 14227-7801 and 7802, 14228-7341, 1419.

(2) In 1974 the costs of investments and operation of the Austrian Study Association for Nuclear Energy Ltd. were budgeted for the first time by the Federal Ministry of Science and Research; up to and including 1973 only Sch. 25 million had been apportioned for this Association in the budget of the Federal Ministry of Science and Research; the rather substantial remainder was paid by the Federal Ministry of Finance. Together with the amounts of the budget of the Federal Ministry of Finance, the above data would be as follows:
Total: 1970: Sch. 186.968 million; 1971: Sch. 272.288 million; 1972: Sch. 385.413 million;
1973: Sch. 422.005 million; increase 1970-1974 = 159.7 %; increase 1973-1974 = 15.1 %;
Miscellaneous: 1970: Sch. 95.164 million; 1971: Sch. 123.429 million; 1972: Sch. 171.416 million;
1973: Sch. 167.489 million; increase 1970-1974 = 104.8 %; increase 1973-1974 = 16.3 %.

6.3 DEVELOPMENT OF EXPENDITURE

The total budget for institutions of higher learning increased by 84 percent between 1970 and 1974 (budget estimates). In the past few years, the annual rate of increase reached almost 20 percent; once it was even 21 percent. Over the same period of time, personnel expenditure increased by 91 percent and material expenses by 99 percent.

Per chair the budget for the institutions of higher learning (not including building costs) increased from Sch. 1.892 million (budget estimate) in 1970 to Sch. 2.869 million (budget estimate) in 1974, i.e., by 52 percent. Per chair the university expenditure (without building costs) increased from Sch. 2.029 million in 1970 to Sch. 3.320 million in 1974, i.e., by 64 percent.

Table 1: Budget not including building costs and funds for university-related promotion of science and research (4): by universities and art schools (Federal budget estimates)

	1970	1971	1972	1973	1974
1. Budget without building costs and without university-related promotion of science and research, in Sch. million	1,980.511	2,209.645	2,683.972	3,226.032	3,858.281
1.1 Universities (including university facilities)	1,838.459	2,056.869	2,513.853	3,028.396	3,635.724
1.2 Art schools (1)	142.052	152.776	170.119	197.636	222.557
2. Chairs (2), total	1,047	1,102	1,194	1,265	1,345
2.1 at universities	906	950	1,018	1,060	1,095
2.2 at art schools	141	152	176	205	250
3. Austrian and foreign regular students, total (3)	53,152	57,930	64,806	70.878	75,000
3.1 at universities	51,276	54,870	61,151	66.850	70,500
3.2 at art schools	1,876	3,060	3,655	4,028	4,500
4. Budget without building costs and without university-related promotion of science and research per chair, in Sch. million					
4.1 at universities	2.029	2.165	2.469	2.857	3.320
4.2 at art schools	1.007	1.005	0.967	0.964	0.890
5. Budget without building costs and without university-related promotion of science and research per student, in Sch.					
5.1 at universities	35,854	37,486	41,109	45,301	51,571
5.2 at art schools	75,721	49,927	46,544	49,066	49,457

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(1) Heading 143
(2) At art schools: professors
(3) Winter semester 1969/70 up to winter semester 1972/73 according to the Austrian Central Office of Statistics; winter semesters 1973/74 and 1974/75 estimated.
(4) Outside the regular budget for institutions of higher learning

For every student at the universities the budget (without building costs) increased from Sch. 35,854 in 1970 to Sch. 53,863 in 1974, i.e., by 50 percent. At art schools the 1974 expenditure (without building costs) was Sch. 49,457 per student; this amount almost equals that at the universities.

Table 2: Expenditure without building costs and without university-related promotion of science and research per student (Federal budget estimates)

	1970	1971	1972	1973	1974
1. Expenditure without building costs and without university-related promotion of science and research, in Sch. million	1,980.511	2,209.645	2,683.972	3,226.032	3,858.281
2. Austrian and foreign regular students at universities and art schools (1)	53,152	57,[illegible]	64,806	70,878	75,000
3. Expenditure without building costs and without university-related promotion of science and research per regular student, in Sch.	37.261	38.143	41.415	45.515	51.444
4. Expenditure without building costs and without university-related promotion of science and research and without study promotion in Sch. million (2)	1,852.011	2,072.335	2,520.367	3,028.525	3,608.681
5. Expenditure without building costs and without university-related promotion of science and research per foreign student, in Sch. (3)	34.844	35.773	38.891	42.729	48.116
6. Foreign regular students at universities and art schools (1)	8,573	8,867	9,154	9,443	9,700
7. Expenditure without building costs and without university-related promotion of science and research for foreign students, total in Sch. million	298.718	317.199	356.008	403.490	466.725
8. Expenditure without building costs and without university-related promotion of science and research for Austrian students, total in Sch. million (4)	1,681.793	1,892.446	2,327.964	2,822.542	3,391.556
9. Austrian regular students at universities and art schools (1)	44,579	49,063	55,652	61,435	65,300
10. Expenditure without building costs and without university-related promotion of science and research per Austrian student, in Sch. (5)	37.726	38.572	41.831	45.944	51.938

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(1) 1969 to 1972 according to the Austrian Central Office of Statistics; 1973 and 1974 estimated; winter semesters only (1969/70 to 1972/73);

(2) Promotion of studies: item 1/14207/768 and 1/14307/7680; from 1973 onward 1/14107/7680;

(3) 4 divided by 2

(4) Expenditure without building costs and without university-related promotion of science and research minus expenditure without building costs and without university-related promotion of science and research for foreign students total

(5) 8 divided by 9

Development of income

The total income of universities and art schools amounted to Sch. 140 million (budget estimate) in 1974. Thus, it was slightly higher than that included in the 1970 budget estimate (Sch. 133.1 million). In 1972 and 1973 there had been a significant decrease in income, probably due to the abolition of university fees (University Fees Act of 1972, BGBl. Nr. 76/72).

6.4 EXPENDITURE AND COST ACCOUNT

The data on the amounts spent per student (section 6.3) obviously are problematic. What is the significance of such a mean value? Even a detailed analysis of the figures would not reveal, for instance, how much the various studies cost, how much money was spent on drop-outs or what kind of relation exists between the increase in the number of students and actual additional costs.

Principles of business management very seldom enter into the discussions of university issues. Basic terms such as expenditure, expenses and costs are frequently mixed up and used in different ways. In cameralistic accounting we speak of expenditure, flows and payments. Expenditures are not related to the rendering of a service. A periodic calculation of expenditure, i.e., the charging of expenditure to the overall economic life of an object (for a certain accounting period) shows the expenses. Costs are defined as the consumption of goods based on current prices and related to services. Thus, it is clear that the budget for institutions of higher learning and the accounting of payments received by said institutions are not suited for cost accounting, neither in the form of actual cost accounting (actual costs by accounting period), nor in the form of a budget accounting system.

There are practically no "market prices". A special problem is the measurement of the output, i.e., the use of the institutions of higher learning. Very often only the problem of quantification is considered. The qualitative aspect is usually completely disregarded due to the extreme difficulty of a theoretical definition.

The lowest costs would be incurred if as many students as possible completed their university studies as quickly as possible. This would certainly also require a separation of fixed costs and variable costs. The costs depend on the desired level of qualification. This level, however, is not predetermined by science, but is rather based on political decisions.

Cost accounting in higher education cannot simply copy concepts of business management. A number of difficulties result from the existing cameralistic accounting method and - even more important - from the specific functions of the institutions of higher learning. The development of suitable cost accounting methods as planning and controlling instruments has just started.

An important initiative has been taken by the Federal Ministry of Science and Research: A cost accounting plan for the departments has been developed. (1) Experiments have started at some departments in the winter semester 1974/75.

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(1) Erich Loitlsberger, Dieter Rückle, Gerhard Knollmayer, Hochschulplanungsrechnung, Aktivitätenplanung und Kostenrechnung an Hochschulen, publication of the Federal Ministry of Science and Research, Vienna 1973.

7. BASIC DEVELOPMENT TENDENCIES IN TERTIARY EDUCATION

The following section gives no general concept for the development of the universities. It deals above all with the problems of the "mass university", which occupy a prominent position in university policy today. Naturally, it is impossible either to treat or to solve all problems of university development. It is hardly possible to describe and this is an international problem - the various functions of universities isolatedly. The complex interdependence of development tendencies cannot be analyzed on the basis of information available today.

In Austria, experts in the field of university policy have soon realized that the problems of university development can also be solved by means of qualitative measures. In particular, we should mention the reform of regular degree studies and the proposed organization reform as laid down in the government bill of the new University Organization Act.

These achievements in the Austrian university reform form the basis for further measures. The presentation of the "basic guidelines for tertiary education" serves the purpose of continuing the discussion on the university reform and of dealing with unsolved problems.

A research plan was already submitted in 1972 (see section 4); the present section deals mainly with teaching at the universities. The research plan as concerns research at the universities is being concretized.

The present report also deals with topical planning tasks that must be solved within a fairly short period of time, i.e., until the beginning of the 80's.

The list of planning tasks also contains a few items which constitute the starting points for long-term planning activities.

It is the aim of this section to rationally define important topical problems, i.e., as free as possible from ideological implications. Some solutions are proposed, or at least some indication for possible solutions is given. It is obvious that political standpoints enter the discussion and elaboration of new prospectives: Going back to earlier concepts is clearly rejected. The plan is based on the present situation of the Austrian educational system, and in particular on the status of secondary (II) and non-university post-secondary education. Should significant changes occur in these realms they would definitely affect the starting points for the development of tertiary education.

A great number of proposals can be realized only if the reform of the organization as envisaged in the University Organization Act is actually carried out.

Some items are discussed in more detail than others, which does not indicate, however, a system of priorities. It is simply the case that for some items a greater number of ideas have been developed than for others; in some areas we have already reached the stage where concrete measures are just about to be undertaken, while in other fields we still have to identify and discuss the problems.

7.1. DEVELOPMENT PROBLEMS IN TERTIARY EDUCATION

7.1.1 Science at institutions of higher learning

Research into scientific conditions and processes is still in its early stages of development: some theoretical starting points are being discussed, and a few empirical papers have been submitted. As concerns Austria in particular, we have only a very small amount of verified knowledge and empirically supported theses on the development of science.

Also, it is difficult to assess the contribution of universities toward scientific progress. The term "scientific progress" itself is difficult to define, and it is a rather disputed concept particularly in the pertinent technical literature.

We can, however, be sure in one respect: there is no "automatic progress" in science; in other words, "new" or "relevant" results do not come about automatically in the various fields and at various times. "Progress" will rather always depend on the predominant interests in certain scientific findings. These interests usually determine the setting of priorities as concerns equipment, promotion of young scientists, etc.

One reason why it is so difficult to bring this topic into the foreground is the fact that discussions on the efficiency of science are considered taboo. A public discussion of this question is possible only in connection with a reference to the historic achievements of great Austrian scientists. It would be a major progress to eliminate this taboo and to realize that the universities must be seen within the overall framework of national and international achievements.

The division of labour in science has reached such an extent - among others due to the high costs of scientific undertakings - that a limitation to a national scope must be regarded as anachronistic. This applies particularly to a small country like Austria, which has rather limited possibilities of playing a top role in the various disciplines of research. The same applies to the universities, which after all represent only one, yet important type of research institution. The Austrian Research Plan points out the necessity of certain national research priorities. Such national priorities will obviously have to constitute the prerequisites for the development of science at the Austrian universities. In Austria, too, the universities have to share the research tasks with non-university institutions, and the importance of extra-university science and research is steadily increasing. From an international point of view, the share of university research in the total national research activities and in the expenditure on research is disproportionately high in Austria.

Of all institutions engaged in science the universities have the greatest freedom. This freedom of science is guaranteed by law. The fundamental "functionality" of this freedom of science for the special tasks of the universities in science and research is evident, even if dysfunctionalities cannot be ruled out in every single case.

Within the overall concept of the university as the centre of scientific activities, the function of the university seems to become more and more that of training young people. This function is not only the result of the rising significance of extra university research, but also of the increasing scope of educational and training tasks of the universities in the course of the general expansion of education,whereby the universities are entrusted more than ever before with quantitatively and qualitatively new educational and training tasks.

These considerations also determine all those plans concerning the significance of university research that start from a dominant position of teaching tasks or regard the universities as having a "residual function" in research in the sense that the universities concentrate on such areas of research where no competition is to be expected from extra-university research, while in the other areas of research the universities concentrate on the reproduction of extra-university developments.

It goes without saying that such a negative assessment of the role of the university cannot provide a sound basis for the future development of the universities.

It will be necessary to further discuss the division of labour between the university and extra-university scientific activities.

The Austrian Research Plan attempts to delineate university and extra-university research, and classifies research related to science and culture as university research, while research into socio-political and economic questions is attributed to the extra-university realm. The model of this division of labour is based on the differentiation of research into an application-oriented branch and a science-oriented one, i.e., the model rests on the classical separation into basic research and applied research.

Today, however, we can see that this model no longer suffices. On the one hand, basic research is more and more moving into the extra-university realm. On the other hand, sponsored research projects, dealing in part with highly specialized experimental developments, and applied research are increasingly carried out at the universities. Basic research can no longer be regarded as an isolated branch because of the interdependence between technological progress and scientific development or between theory and practice.

In addition, we have become increasingly aware of the causality that exists between society and the economy and the development of science, which questions the traditional concept of "pure" science.

At present, it seems to be almost impossible to develop absolutely convincing perspectives as to an independent role of the universities in the overall development of science.

New aspects of the division of labour may result if in addition to the application-orientation of research other aspects of scientific activities are used for the elaboration of a model of the division of labour.

The entire process of the acquisition and communication of scientific knowledge must be taken into consideration. Research is an integral part of science, but it does not constitute science as a whole. Various stages in the development of individual disciplines of science should be taken into consideration. The role of a university for an individual branch of science may differ at various developmental stages. This would mean that various models would be required for the individual disciplines, or, in other words, one model would not suffice for one university.

An interesting aspect is the question as to the role of the universities for the institution of new disciplines and branches of science. The universities could have an innovatory function in this field.

A model which provides for a strict division of labour between university and extra-university research cannot remain valid for a long time as it would lead to an isolation of the university. The coordination and cooperation between universities and non-university research institutions is essential for the future development, the more so as we can already observe a considerable interdependence of personnel.

The guiding principle for the definition of the tasks of the universities as institutions engaged in scientific activities will be their responsibility in society as a whole. The universities have a responsibility toward the general public and not toward individuals.

As scientific-technological progress becomes more and more problematic, the development of science - as seen from the point of view of the application and utilization of scientific findings - has become a certain problem. The universities in particular have a special role to play in this field besides seeing to a science policy of their own. This very combination of competence in the subject matter and the freedom of science that is institutionally guaranteed is the prerequisite for scientific activities at the universities in order to fulfill this task that also includes a critical approach. Therefore, a future perspective of the development of science is the development of "critical science" which exercises a "controlling function" oriented toward the interests of science as a whole.

In addition to the study of the general prerequisites of science possibly also the study of the problems of the application of science could make it possible to arrive at the unity of science.

The organization and institutional basis of university science also permits scientists to orient themselves to long-term R&D perspectives to a greater extent than is possible in the field of extra-university research. Also, they can concentrate on those research areas and disciplines that do not constitute any immediate priority for extra-university research. In this sense, university science - but also scientific activities financed mainly by the government - might exercise a corrective function in that it corrects the development of extra-university science. The question remains whether or not this function of the universities should constitute the decisive aspect of the principle of the unity of science in the present situation.

This corrective function does not mean, however, that university science, the main criterion of which is the alienation from society, should become more and more academic. The universities will be able to exercise their scientific function only if they deal with the major problems of social, economic and technological developments in order to find solutions for them. The universities will also have to take initiatives and should not wait for orders from outside.

The universities are state institutions in which a major part of the scientific material that is available to society is collected and produced. At the universities a large part of the data are processed, and the universities have the responsibility to distribute and communicate scientific knowledge. Therefore, the universities are those scientific institutions that have to guarantee the general availability of science. Science at the universities must thus follow the postulate of being accessible to the public. This aspect results in an essential marginal prerequisite for the execution of private sponsored research at the universities. It also constitutes the decisive point of reference to "teaching", whereby the fulfillment of this task is not only limited to the organization of regular studies.

The state does not only regard the universities as institutions that should be open to all citizens, but also as institutions that serve the administration of the state and help to solve problems of its infrastructure. Political decisions that involve considerable costs or have a great impact on the economy need, already in the planning stage, intensive scientific consultation and innovatory stimuli. The increasing complexity of the state infrastructure renders scientific planning and scientific preparation of decisions indispensable. That leads to application-oriented research projects in the interest of the state.

This function of the university is exercised by those members of the university who already engage in consultation activities; yet, the organization of scientific consultation for politicians and the scientific preparation of political decisions has so far not passed beyond the initial stage.

Scientific policy consultation cannot be limited to the preparation of scientific data for the decision-making process. The scientists are also called upon to publicly express their opinions on political questions on the basis of their competence in the subject matter.

7.1.2. The position of the university in the educational system

The traditional university forms the apex of the hierarchial structure of our educational system. The higher one moves up in the hierarchy the more limited is the access to the educational institutions.

Certain positions in the professional hierarchical structure, and thus also social chances, depend on the formal completion of studies within the educational system, expressed in terms of academic degrees awarded upon the completion of studies. Certain professions, particularly the traditional academic professions, are open only to holders of academic degrees; in other areas the academic degree grants access to higher positions in the hierarchial structure although it does not exclude persons who do not have such degrees.

At the same time this system shall guarantee that with an increasing selection and duration of studies only the most qualified persons reach the higher levels of education.
The great significance of science and its social appreciation form the background for equating the highest educational and training levels with scientific education and training.
University education and training is organized according to science-inherent criteria, which are expressed, for instance, in the differentiation of training programmes according to scientific disciplines, in the fixation of educational contents according to the requirements of the individual fields and in the instruction through scientists.
For university studies certain principles apply as laid down in sec. 1 of the General University Studies Act.

Particularly these characteristics of university education and training are increasingly questioned as to their rationality and legitimacy and conflict with the social developments.

A number of problems is raised in connection with the "boom" in tertiary education, due to the rising demand for education and highly qualified experts. Concrete examples are capacity and cost problems, the increasing necessity of instruction through non-scientists, the tendencies toward a reduction of the duration of studies and the application of secondary-school teaching methods to the university.

Against this background we must consider, on the one hand, the criticism raised against too strict a system of qualification and, on the other, the plans that aim at a differentiated relation between educational level and social status.

The differentiation of the demand for "university graduates" increasingly raises the question whether the traditional scientific training constitutes the optimal form of education and training for all types of university graduates.

The same applies to the differentiated individual educational demands of the students. The rationality of selection criteria with regard to both educational aims and socio-political concepts (equality of opportunities) is questioned.

The institution of post-secondary training programmes outside the universities, the expansion of adult education facilities, the creation of institutions for the further training and education of secondary-school graduates pose the question as to the specific function of the universities in post-secondary education, but also in the realm of the entire education following regular compulsory education. The determination of the qualitative role of university education results in the determination of the quantitative share of universities in post-secondary education.

On the whole we have to deal with a process of transition, which is often characterized in terms of a change from the "elitist" university to the mass university. In the course of this process the traditional university and the social change often conflict with each other and require the universities to innovate and rationalize. This is a process which has not been completed despite the strong reform efforts and frequent reform initiatives. If the development of the universities is not to fall back upon its traditional form, the university reform must be continued.

Every year a growing number of young people acquire the qualification to enter tertiary education by completing a secondary school. According to estimates of the Federal Ministry of Education and Art 30,000 young people will graduate from secondary schools in 1980. Only a small percentage of young people acquire the university entry qualification at secondary technical and vocational schools, i.e., have a professional education.

The number of young people transferring to post-secondary education is relatively high. This can be explained by the objective and subjective necessity of acquiring professional training after the secondary-school leaving examination in order to obtain a job on the respective level of qualification.

This situation is bound to persist for some time, as the measures taken become effective only in the long run, despite a thorough reorganization of post-secondary education. Despite the expansion of the non-university post-secondary school educational facilities, the increasing educational demand must still be met mainly by the institutions of higher learning. The educational possibilities in the non-university realm - particularly those above the secondary school level - are almost exclusively limited to teacher training. The expansion of educational possibilities in the non-university field are still in the experimental stage. Even if the efforts in this field would be intensified enormously both with regard to an expansion of capacity and a diversification of professional areas, these measures would become effective only in several years from now. An added difficulty is the reorientation of secondary-school graduates whose expectations are mainly directed toward university studies.

For the reasons stated above the universities will have to continue, at least for the prognosis period, to bear the main burden and satisfy the demands of secondary-school graduates for professional training and education.

Educational demand and social advancement

The attainment of higher professional positions depends more and more upon the qualifications obtainable within the formal educational system. On the one hand, better qualifications are required for higher positions, on the other hand the educational system has come to play a very important role in the general social restructuring process: it offers possibilities of advancement particularly for the masses. More and more sections of the population want to acquire these qualifications. As a consequence of the increased qualification demands young people have to reach a higher level of education than their parents if they want to maintain the same social position as their fathers or mothers. Thus, university studies are no longer confined to the self-recruitment from the traditional educational strata, but are an important means for preserving a certain status.

At the same time, however, they are of great importance for the underprivileged strata of the population, as they offer the possibility of advancement via the formal educational system, including the universities. This is an essential characteristic of a decmocratic efficiency society.

On the one hand, this is necessary in order to be able to utilize the "talent reserves"; on the other hand, it helps to avoid a neutralization of competition for higher positions In this sense, the social mobility is a functional necessity. The possibility of social advancement continues to be a central argument in an efficiency society in which living opportunities differ and are dependent on levels of achievement. If this possibility were eliminated this would most likely seriously challenge the legitimacy of the society, which in turn could have unforseeable political consequences. Thus, the competition for higher education involving greater and greater sections of the population will continue to play a decisive role in our social system.

Equality of opportunity and right to education

Apart from the above phenomena, attention should be drawn to another aspect that goes beyond the present training function of the educational system and points toward a completely new educational function.
There is no doubt that the value of education goes beyond its immediate professional utilization. The right to this "excess education" (over and above the actual professional training) should not only be limited to a small group that uses it in a negative sense, i.e., as proof of its elitism. Equality of opportunities does not only apply to the economic and professional realm but also to education in general. In this sense education is an integral determinant of the quality of life. This calls for a continuous raising of the levels of education of the total population, as this is the prerequisite for the participation of larger sections of the population in the cultural traditions and the innovation as well as in the political and social determination of their future. This is the only way to realize the emancipatory and creative character of education.

In view of the varied socio-political and economic problems that go beyond the productive utilization of education, this will be an absolute necessity for the future. This "revolutionary type" of an "educated society" is a long-term perspective; it seems to be an unavoidable development and one of the most positive ones as such. An increasing portion of the wealth of society will have to be made available in order to attain this goal. The "over-qualification" will become a constituent element of future educational policy.

In the future the link between the educational level and the social status of the graduates will not be as close as today. A university graduate will no longer be able to automatically enter upon a higher professional career. By pushing the selective function of the universities somewhat into the background it will be possible to gear the studies to a greater degree toward promotion of studies and qualifications. The universities have a dual function in this process: they have to meet the quantitative demand for education, and they have to fulfil a specific task, namely "education through science". The imparting of "excess" education must not be an end in itself, but will have to be practice-oriented. Essential aspects of education through science are the ability and willingness to critically and rationally confront the problems, i.e., elements of a basic scientific attitude. Here, the central problems of the present should be dealt with. New ways of communication will have to be sought. The governing principle must not be an elitist monopolization of scientific knowledge, but the conscious communication and spreading of knowledge.

Perspectives of a labour market-oriented educational policy

A demand-oriented educational policy cannot disregard the situation on the labour market. The university development must have a quantitative dimension, i.e., demand-oriented planning, and a qualitative one, i.e., labour market-oriented

planning. In addition the possibilities and conditions for realizing these dimensions must be investigated.
As concerns the short-term perspective, which corresponds to the actual quantitative demand for education, one has to look at the given situation (see chapter 5). In Austria there are at present no signs of unemployment with regard to university graduates. Comparisons on an international level show thatAustria seems to have a "deficit" in highly qualified persons compared to other highly industrialized nations. Recent investigations that were carried out by different agencies revealed deficits in the areas investigated and even showed some bottlenecks in the supply sector. In the long run the basic tendencies in the quantitative as well as qualitative demands for experts in the respective fields will have to be taken into consideration.

The progressive introduction of scientific methods in the field of production is bound up with the availability of highly qualified experts. The importance of science and scientific technical qualifications for the economic development of a country is beyond doubt. This applies also to the stages before and after the production process: planning, organization, development, control, distribution.

Also in spheres outside the economy per se (health, education, etc.) the importance of science is steadily increasing. The growing complexity of modern society necessitates to an increasing extent the employment of scientific methods. The growing need for planning actitivies on the governmental level, particularly in the field of infrastructure calls for scientifically qualified personnel. The entire realm of the "social sciences" thus becomes a new area of concentration next to the natural sciences.

In addition to the reproduction and the expansion of the "production" of the traditional type of scientific qualifications, the increasing science-orientation endows the universities with new substantive tasks in the field of training and education.

The demand investigations of the 60's were based on a relatively simple model. The essential point of reference for the determination of the expansion of the demand were assumptions on the economic growth, differentiated according to sectors of the economy. This first stage in the development of an educational economy, which is still rooted in the mind of the public, has given way to a new approach to the problem of the demand for university graduates. See University Report 1972 (chapter 7).

The main differences are that, aside from the educational demand, the analysis also includes the structure of the university education and the qualitative changes in the demand for highly qualified experts. Any statement on the demand for university graduates implies so many political decisions - economic, social and educational ones - that an objective determination of the demand in the narrowest sense is utterly impossible.

Mass education and possibilities of realizing individual demands for education

Newly instituted study programmes constituted a "substantive" expansion of the educational possibilities; yet, apart from differentiations as to types of courses, qualification levels and the organization of studies, etc., this expansion exhibited a relatively homogenous pattern.

Despite a wide range of reasons and motivations for studying and diverse studying patterns, a clear tendency toward standardization and homogeneity can be noted. This change is best expressed in the attitude that training and educational goals other than the completion of regular degree studies are increasingly regarded as illegitimate. It remains to be seen whether or not this tendency can be regarded as a positive one.

At present almost the total demand for university education is met by traditional, subject-oriented regular studies. The student's possibilities of choice are actually limited to "the choice of study programmes". The question arises whether the rather diverse study aims, study motivations and individual talents of the students can be fully developed in the present system of education. The differentiation in the demand for education obviously also extends to the modes of communicating knowledge and to the learning techniques. The studium irregulare, a very decisive innovation of the Austrian university reform, allows for a variation of university studies, but only with regard to the substantive dimension.

The lack of homogeneity of the student population caused by the different social backgrounds of the students has a growing impact on the traditional forms of university studies. Students who are already engaged in paid employment have a particularly difficult starting basis, which in turn causes difficulties for the universities.

The consequences of a situation where an inhomogeneous demand for education is juxtaposed to a homogeneous educational system cannot be estimated as there are no possibilities of comparison.

Many investigations have revealed a high degree of dissatisfaction among the students, a phenomenon that cannot simply be explained by unwillingness to perform. A number of indicators show that the students undergo a permanent process of disillusionment in the course of their studies which destroys many of their primary motivations. Many students experience the study process as a continuous pressure to adapt; this leads to the so-called "minimizing strategy, i.e. the studying activities are continued only because of secondary motivations.

This does not necessarily imply the "danger of the levelling effect". In addition to the general, mainly technocratic, aspects, the possibility of realizing also individual demands as to training and education is an integral part of an educational policy which is not exclusively directed toward the utilization of education. An optimal use of the different individual talents and demands calls for an "individualization" of education.

It will thus be necessary to investigate whether or not special modes of education should be provided for exceptionally talented students.

A higher degree of labour market-orientation of university education, is not necessarily in contradiction to individual demands for education. In many cases the "disappointment" of the students is due to the lack of practice- and profession-orientation of the present studies.

The counterpart of mass education at the universities will have to be individualized studies, i.e., opportunities to realize individual interests and individual abilities and talents; employment of different learning and studying techniques; a varied structure of studies; study possibilities taking into account different social backgrounds; etc. Yet, it will always be necessary to make a compromise between the different requirements of the labour market, the possibilities of the universities and the qualitatively differentiated demand for education.

University planning oriented toward the labour market and the demand for education

There is no doubt that the labour market can absorb only a limited number of the traditional type of university graduates. The qualitative aspects of demand and the structure of the university education are variables that allow for a compromise, namely the combination of demand-oriented and labour market-oriented planning.
The absorbtion capacity of the labour market for university graduates can be increased and controlled to a certain exten if the university education offers a wider range of professional training. An important aspect of such a policy is the continuation of the study reform, presenting new ideas and new solutions that go beyond the reform of the traditional university studies.

Thus, we arrive at a developmental model that is oriented toward the demand for education (quantitative aspect) and toward the requirements of the labour market (qualitative aspect), in order to increase the practical applicability of university education.

This means that the training programmes will have to be organized more and more with a view to the requirements of the professional areas. Another aspect to be taken into consideration is the increasing inhomogeneity of the demand for highly qualified experts: an increasing number of scientifically qualified personnel is required also for lowe positions (non-executive ones) in the professional hierarchy
The demand for highly qualified persons seems to exhibit a twofold trend. On the one hand, there is need for experts who find solutions for various problems; and on the other hand, we need scientifically trained experts who implement these solutions.

Also within the traditional academic professions, which are reserved to university graduates, the need for a horizontal and vertical division of labour becomes apparent.

Two kinds of highly qualified experts are needed: experts with highly specialized knowledge and skills, and experts with a thorough knowledge in fundamentals.

Knowledge must not only be directly applicable but must be updated continuously. The rapid turnover of scientific knowledge requires permanent further education.

Thus, the university education must become highly differentiated with regard to study aims, qualification levels and subject matter, abilities and skills to be imparted as well as attitudes and general abilities that are relevant to the profession but cannot be utilized directly.

The application of scientific knowledge and methods is steadily expanding and calls for a permanent and substantive expansion of scientific training.

The increasing application of scientific knowledge and methods in various fields of activities thus becomes one of the essential tasks of the universities, i.e., fields of activities have to be integrated within the framework of scientific training.

The educational objective of the university is no longer the traditional university graduate, but a wide range of highly qualified experts who can no longer be subsumed under a uniform title.

Regular degree studies in their present form will no lo suffice to fulfill the educational tasks of the universities.

Selection or success-orientation of the mass university

The question of selection has become a very topical one in connection with the mass university.

As concerns the selection-orientation of an educational system, we have two extreme standpoints: On the one hand the concept that any form of selection is a violation of the principle of equality of opportunity and represents as such a hidden numerus clausus or a social numerus clausus.

On the other hand, we encounter concepts that attempt to solve the problems of the mass university by simply employing selection criteria. These selection criteria are believed to present a solution for the problems of the presumed or actual deterioration of the educational level and the capacity problems.

The question remains whether or not such tendencies are inherent in a mass university, as they offer a rather simple solution for the basic problems. They possibly constitute an uncontrollable mechanism of self-protection of the institutions against

- actual or expected excessive burdens (high numbers of study beginners);
- a decrease in the academic standards and achievements of the institutions through a drop in academic level and over-production of graduates;
- conflicts.

Such concepts and tendencies become problematic if they represent nothing but an attempt to escape the need for adjustment and innovation.

The rates of selection are already very high. On the basis of the drop-out rates the university is a highly inefficient institution. About 50 percent of the study beginners of one graduation year drop out. Drop-outs usually stay fairly long at the university without taking examinations as proof of academic performance.

Obviously the drop-out rate cannot simply be taken as a measuring rod of success. A certain percentage of secondary-school graduates register at a university without having the intention of completing a study programme. Yet it is difficult to exactly ascertain this percentage. It is not possible to clearly establish the characteristics of this group. It certainly includes the "pseudo students" who register in order to obtain the advantages that are connected with the status of a student. Then we have those students who seriously intend to study but who do not necessarily want to complete regular degree studies.

Still, there remains a substantial percentage of students who plan to complete their studies, but fail to do so for various reasons.

The individual and social use of an incomplete university education appears to be minimal. On the other hand, drop-outs cannot simply transfer to a lower level of education due to the rather scarce offer of educational possibilities.

The increasing numbers of drop-outs - even if the drop-out rate per se does not change - will have serious social, economic and mental consequences for the individual drop-outs.

In the light of the social conditions that cause students to drop out, the plan to tighten the selection requirements is diametrically opposed to the concept of equality of opportunity. The students who are more likely to drop out because of their social background, i.e., students from underpriviledged sections of the population, will most likely be affected much more profoundly by such measures, because these groups do not have adequate means to compensate for the termination of studies.

A fixation of the selection mechanism in the study flow is only reasonable in the first few semesters. On the other hand, the academic success in the first few semesters does not allow for a proper prognosis for the student's performance in the subsequent semesters nor for the future professional abilities. The present courses of studies are not organized on a selection principle. Yet, it seems to be rather questionable to change the original function of introductory courses, and use them as selection criteria. The importance of examinations would be further enhanced, and students' studying activities would be limited to the preparation for examinations. The introduction of stricter selection criteria would not only raise the "levels" of the individual courses, but could also lead to an inadequate didactic approach and an insufficient occupation with the student.

The consequence would be considerable delays in studies for those students who do not want to give up their studies; they would pass examinations only after trying two or three times.

The common belief that the student does not work very hard is not true in every case; on the contrary, in many study programmes the student has to work very hard if he wants to complete his studies within a reasonable period of time. The tendency toward the minimizing strategy in the studying process would be further intensified. The possibilities of a reflective and intensive approach to the subject matter of a course as well as the opportunities to acquire knowledge of a more general nature would be reduced considerably.

The present standards of university pedagogics, the degree of objectivity in examinations and the importance of irrational selection criteria, etc., would frustrate many intentions of the study reformers; some of the present problem of the university would even be accentuated. One can assume that the genuine achievement in the learning process would more and more be replaced by the student's ability to adapt to the system. If this were the case the university would negate itw own objective: "education through science"; the training to do independent and responsible work would become an unattainable goal.

Highly selective systems will go hand in hand with a high studying intensity on part of successful students, in particular a considerable investment of time for the preparation for examinations; it will not necessarily guarantee high-quality training and education. This applies above all to the demand for highly qualified experts, where the ability to reproduce a great amount of knowledge seems to be of minor importance.

The selection problem which is closely bound up with the principal problems of university education is an important aspect of the university reform and does not allow for simple solutions. The regulations governing access to the university are based on the belief that those who have acquired the university entry qualification, also have the abilities to complete a study programme. Thus, at least in this respect, the selection is a function of the secondary field of education. As it will be impossible to "perfect the selection" on the secondary level, the universities will have to establish additional selection criteria.

From the point of view of both the qualitative and quantitative efficiency the university will have to become success-oriented if it is to fulfill its tasks. The training and socialization of highly qualified experts is hardly compatible with a strictly selection-oriented approach. The guiding principle should not be selection, but the promotion of talented students.

A success-oriented system is more likely to produce high-quality achievements in the realm of teaching and studying than a strictly selection-oriented one. This applies particularly to the acquisition of those qualifications that essentially determine the quality of the training and education. Measures will have to be undertaken in order to solve the problems resulting from the need to preserve the educational level on the one hand and to counteract disintegration phenomena of the mass university. on the other.

Access to university studies

Capacity bottlenecks and demand considerations have led to the introduction of the numerus clausus in a number of countries of Western Europe. The "import" of the awareness of a crisis has made this problem a topical issue also in Austria. Often, however, one forgets that in Austria the situation is quite different. The tremendous expansion of the universities during the past few years and the present state of the university reform have created the prerequisites for avoiding this emergency measure. In addition, a number of technical and fundamental aspects speak against the introduction of a numerus clausus. The selection of secondary-school graduates poses a number of almost insolvable problems and is connected with a great amount of bureaucratic work. The feedback to the system of secondary schools interferes with the possibilities of their reform. The present structure of secondary schools - general secondary schools (which do not provide professional training) predominate - and the restricted educational possibilities in the non-university post-secondary realm would lead to almost insolvable educational problems for many secondary-school graduates.

As international experiences show, the introduction of a partial numerus clausus - restriction to individual subjects and/or universities - shifts the problems to other study programmes and will sooner or later lead to a total numerus clausus for all study programmes and universities. The numerus clausus jeopardizes all the efforts to achieve the equality of opportunities. The secondary-school leaving examination

would practically lose its value as a university entry qualification. Demand-oriented university planning can only mean open access to universities. This access, however, is undoubtedly connected with a continuation of the study reform. It includes, of course, the necessity for increased informatio of study beginners on occupational and professional opportunities and increased orientation of the beginners in the selection of the study programmes toward the occupational opportunities to be expected.
A revision of the access requirements for universities could only be meaningful if the entire system of post-compulsory school education, including the universities, were re-organize

Research and teaching

The unity of research and teaching is, at least as a postulate, a constituent characteristic of the universities; it is an essential component of the identity of the university and, at least for part of the student population, a claim to university education.

This unity of teaching and research should be guaranteed not only in general, but also through chairs and departments. It implies that most university teachers are scientists at the same time. The decisive criterion for the selection of teachers is their contribution to research.
The postulate for the unity of teaching and research, however, is likely to conflict with certain aspects of scientific development and above all with the requirements of mass education at the universities:

- The instruction through scientists proves to be rather expensive in the case of large student figures. On the other hand, the teaching staff has constantly fewer possibilities of fulfilling research tasks because it is overburdened with teaching responsibilities and particularly with examinations and administrative work.

- The process of shifting research to research facilities outside the universities as well as the international division of labour within research forces the universities to assume a purely receptive attitude in many research areas.
- The possibility of student participation in the research process is obviously decreasing as the student figures are growing.

Programmes that envisage such a division of labour within the university or an institutional separation of research and teaching are thus gaining in importance. However, there exists no developed formula for the solution of this problem, but prospects for solutions can be seen if one starts from the fact that different stages of the integration of research and teaching are possible within the entire institution. Especially the identity of training and research facilities would not have to be guaranteed for all educational institutions. The extent of instruction through scientists can be differentiated (unity of science and research: scientific professional training and education through science; research is only a part of the scientific activities) if the various types of studies and sections of studies are taken into consideration.

It could be possible to realize the unity of research and teaching in various degrees, i.e., according to the different educational aims of study programmes and sections of studies. The unity of research and training facilities would have to be guaranteed only on the level of the entire institution. A decisive criterion delineating scientific training and education from other educational possibilities is the followin The university is the teaching establishment that applies - with a minimum time lag - the advances in scientific knowledge to training; it imparts the fundamental knowledge concerning the prerequisites of science and scientific methods. As a minimum programme, these characteristics of university education and training would constitute the decisive criteria for the definition of the field of non-university post-secondary training. The difference between university and non-university post-secondary education will be a difference by degree rather than by principle in all the specific characteristics of university studies (General University Studies Act, sec. 1) and in their effects on the organization of studies. The individual post-secondary educational programmes will have to be classified according to the various stages in which the general principles of university studies are realized. Also, the studies will have to be oriented more than ever before toward professional usefulness. The integration of university education into the entire educational system will be intensified by fulfilling tasks in the field of adult education and further education of secondary-school graduates through new forms of studies. Thus, the problem of the institutional basis of the various training programmes will lose in importance.

On the whole, it is a process in which, on the one hand, the status dimension of university education is reduced in favour of the qualification dimension, and in which, on the other hand, non-university training programmes, too, will increasingly become scientific.

7.2 PLANNING TASKS

The development of tertiary education up to the beginning of the 1980's will have to be characterized mainly by four priority items:

1. coping with the rising number of students by expansion and rationalization measures;
2. the continuation of the study reform and the introduction of an experimental phase in the fields of education and training;
3. the material execution of the organizational reform in all its aspects;
4. the beginning of planning long-term changes.

7.2.1 Demand for study places up to 1980

The aim of educational policy - which is demand-oriented from the quantitative point of view - is open access to the institutions of higher learning. If the present form of acquiring the entitlement to attend an institution of higher learning is maintained, the training and educational possibilities offered are usually oriented to the demands of secondary-school graduates. The estimate of the educational demand on the basis of the number of secondary-school graduates and transfers to institutions of higher learning is limited only to regular degree studies.

The University Report 1972 contains estimates as to the prospective number of students registering for the first tim and as to the total number of students. The first calculatin method is based on those numbers of secondary-school graduat

Table 1: Estimate of the number of students registering for the first time up to 1981 (Austrian regular degree students)

winter semester	Estimate of the number of students registering for the first time									estimate according to Steindl		
	according to space-oriented estimate of secondary-school graduates						according to 7th estimate of secondary-school graduates of the Federal Ministry of Education and Art					
	with 20 percent margin			with 30 percent margin								
	m.	f.	total	m.	f.	total	m.	f.	total	m.	f.	total
1974/75	5.900	3.900	9.800	5.900	3.900	9.800	5.900	3.900	9.800	6.614	3.433	10.047
1975/76	6.300	4.400	10.700	6.300	4.400	10.700	6.300	4.400	10.700	6.672	3.821	10.493
1976/77	7.000	4.900	11.900	7.000	4.900	11.900	7.000	4.900	11.900	7.341	4.102	11.443
1977/78	7.400	4.500	11.900	7.500	4.600	12.100	7.600	5.200	12.800	7.762	4.421	12.183
1978/79	7.300	4.400	11.700	7.600	4.600	12.200	8.200	5.700	13.900	8.328	4.793	13.121
1979/80	7.100	4.300	11.400	7.500	4.700	12.200	8.800	6.400	15.200	8.932	5.193	14.125
1980/81	7.000	4.400	11.400	7.500	4.800	12.300	9.500	7.400	16.900	9.466	5.560	15.026
1981/82	7.100	4.500	11.600	7.700	4.800	12.500	10.100	7.800	17.900			

which would result if the school expansion programme of the Federal Ministry of Education and Art were realized, taking into account 20 percent more pupils than actually envisaged.

The second method is based on a 30 percent margin, the third one on the 7th estimate of secondary-school graduates, which was carried out by the Federal Ministry of Education and Art and mainly extrapolated the pupil numbers without taking the planned school buildings into account.

The fourth estimate was prepared by Josef Steindl, Institute of Economic Research, on the basis of various assumptions, making use mainly of extrapolations. (1)

Since 1967 transfer rates have been collected, broken down by types of secondary schools and by the sex of the pupils, and have been extrapolated for the prognosis. All estimates were based on the assumption that the entire school system remains unchanged. (2)

Unless major changes are effected in the secondary-schools and if the institutions of higher learning retain their attractiveness, between 12,000 and 18,000 secondary-school graduates per winter semester will embark upon university education by the beginning of the 1980's. If the study conditions do not decisively change, the total number of Austrian students will amount to approximately 80,000 - 90,000.

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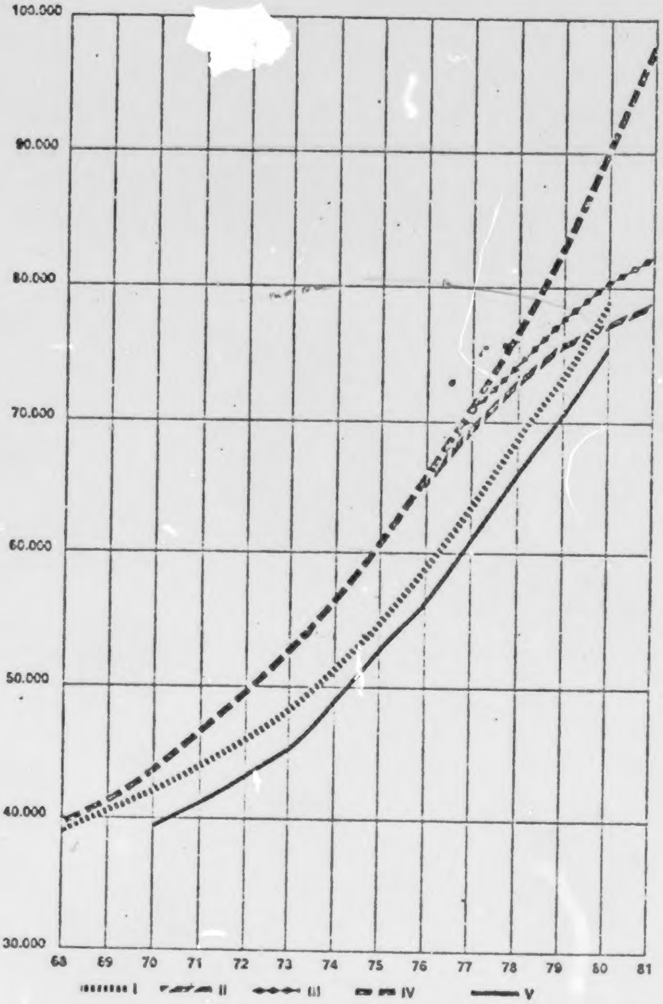
(1) Josef Steindl, Vorausschätzung der in die Hochschulen neu Eintretenden und der Studenten, Institut für Wirtschaftsforschung, manuscript; for the Federal Ministry of Education and Research, Vienna 1972;
the University Report 1972 took into consideration only the computation which Steindl called "highest estimate".

(2) The details of the methods are described in the University Report 1972 (pp. 48).

Graph 1: Estimate of the total number of students up to 1981 (Austrian regular degree students)



Estimate I, based on the estimate of the number of students registering for the first time (Steindl 1972), leads to the same figure for 1980 as the two space-oriented estimates, namely, about 80,000. Estimate IV yields much higher figures, i.e., as many as 91,000 Austrian regular degree students are assumed to study at Austrian universities in 1980/81. On the basis of an evaluation of the different estimates of students registering for the first time as contained in the University Report 1972 we may assume that the number of Austrian regular degree students will in any case rise above 80,000.

The prospective number of Austrian regular degree students will be higher than 80,000 if the number of secondary-school graduates keeps rising as over the past ten years - no matter how much space is offered - , and if the proportions of secondary-school graduates entering higher education and the staying-on rates of students at the universities remain constant.

The first OECD Country Review (1965) did not contain an estimate of the total number of students, but a preview as to the number of study beginners. The Review underestimated - for the early 1970's - the actual number by more than 30 percent per year.

If one looks at all the estimates one has to consider that the figures computed refer to students. The number of studies pursued is, of course, even higher, since one student may enroll in several study programmes at the same time; if the present situation remains unchanged the number of studies pursued will be about 2 - 3 percent higher than the number of students.

The prospective increase in the number of students in Austria corresponds to that assumed for a number of European countrie for the 1970's. The projected growth rates in student figures

Table 2: Estimate of the total number of students up to 1981
(Austrian regular degree students)

		1974	1975	1976	1977	1978	1979	1980	1981
I	m	37.000	38.900	41.400	44.000	47.000	50.200	53.600	
	w	14.700	16.200	17.800	19.500	21.300	23.200	25.200	
	ges.	51.700	55.100	59.200	63.500	68.300	73.400	78.800	
II	m	39.600	41.600	44.000	46.600	48.900	50.500	51.700	52.800
	w	17.100	19.300	21.700	23.300	24.500	25.200	25.800	26.000
	ges.	56.700	60.900	65.700	69.900	73.400	75.700	77.500	78.800
III	m	39.600	41.600	44.000	46.800	49.400	51.600	53.400	55.000
	w	17.100	19.300	21.700	23.400	24.800	25.900	26.800	27.400
	ges.	56.700	60.900	65.700	70.200	74.200	77.500	80.200	82.400
IV	m	39.600	41.600	44.000	46.900	50.200	53.900	58.000	62.300
	w	17.100	19.300	21.700	24.000	26.600	29.500	33.000	36.400
	ges.	56.700	60.900	65.700	70.900	76.800	83.400	91.000	98.700
V	m	35.260	37.247	39.763	42.507	45.486	48.584	51.900	
	w	13.982	14.958	16.842	18.428	20.116	21.861	23.608	
	ges.	49.242	52.199	56.625	60.935	65.602	70.445	75.508	

I: based on the estimate of secondary-school graduates carried out by Steindl in 1972

II: based on the space-oriented estimate of secondary-school graduates (20 percent margin)

III: based on the space-oriented estimate of secondary-school graduates (30 percent margin)

IV: based on the 7th estimate of secondary-school graduates carried out by the Federal Ministry of Education and Art

V: estimate of total number of students by Steindl 1972.

for the Federal Republic of Germany, to give one example, are approximately the same as those pointed out by model IV.

The percentage of students (share of Austrian regular degree students in the entire population aged 18 to under 26 years) will amount to 7.1 in 1976 and already 8.5 in 1980 according to the lowest estimate. If the highest estimate should apply the percentage of students would be as high as 10.3 in 1980 as opposed to 5.6 in 1971.

Any possible changes in the study flows would, of course, affect the total number of students. The statistical materia available on students studying according to the new studies acts shows that students are likely to require somewhat less time for their studies under the new regulations than under the old ones.

7.2.2 Expansion and rationalization of tertiary education

The quantitative as well as qualitative expansion of the tasks to be fulfilled by the university will require a further expansion of universities, which, however, will not suffice in view of the tremendous increase in costs. In the future, rationalization measures will have to be taken more than ever before. It will no longer suffice to increase the efficiency of the universities by simply providing for more personnel and material resources.
In the next few years the expansion of the universities, too, will have to be oriented to the principle of rationalization more than ever before. The guiding principle for the years to come must be first and foremost the expansion of the existing facilities. New facilities are possible only under special circumstances. If new study programmes which already exist at one or several universities are to be instituted particularly the utilization of the available training and education capacities has to be taken into consideration. The costs of new buildings, facilities, etc., must be juxtaposed to those of an expansion of the existing capacities. Economy takes precedence over the regional supply with educational institutions.

The establishment of chairs and departments must be oriented more than ever before to the demand for training and educational facilities. The primary task will be to provide for a sufficient number of high-quality courses as prescribed for the respective study programmes. It will be necessary toexamine in each individual case if new facilities are absolutely required, whereby the existing capacities have to be taken into account. Only if a decisive innovatory impulse for teaching and research can be expected will it be possible to disregard these principles.

It will be of decisive importance to optimally utilize the existing capacity. The primary task is to optimize the utilization of material resources. This concerns questions of the university organization on the one hand, while, on the other, the traditional forms and principles of the distribution of these resources - and also of the personnel - will have to be reviewed. More than ever before the distribution of resources within the universities will have to be oriented to tasks and efficiency. This possibly also implies the reduction of allocations of resources in fields which are decreasing in importance. The prerequisite is a detailed planning at the individual universities based on priorities in the fields of research and teaching. Adequate planning contains also the possibility for a new distribution of resources; in any case reason will have to be given for the individual requests submitted by the universities within the scope of such planning.

The evaluation and optimization of the spatial distribution will be based, for example, on the data collected on the available space, utilization and distribution, which will be continuously extrapolated from now on.

The more rational utilization of capacity will be of primary importance with a view to the teaching requirements; the aim should be an optimal utilization of training capacities. The aspect of a regional distribution will have to move to the background. An even utilization of capacities at the individual universities will be necessary. Perhaps it will no longer be possible to fully take the study applicants' preferences for certain university towns into consideration.

Regional and institutional concentration of study programmes possibly includes the discontinuation of certain study programmes.

Expansion of space

The expansion of universities is based on the "long-term Development Programme for the Construction of Universities" of July 1972 (1). For 1980 the programme lists a total demand for net useful area of 925,000 m2. This means that a further expansion by about 400,000 m2 is required up to 1980. The programme envisages very large areas mainly for the technical universities, for the natural science departments and for the Faculty of Medicine.

Demand for net useful area in 1980: by specialized areas

humanities	80,000
natural sciences	150,000
technology, mining and metallurgy, agriculture	450,000
law, social and economic sciences	80,000
medicine, including veterinary medicine	165,000
Total	925,000

Revisions in setting priorities by specialized areas may become necessary because of changing conditions.

The values (m2/student) for the various specialized areas will have to be constantly tested for their validity. The present building projects will completely eliminate the space deficit in the humanities and law, social and economic sciences. In the natural sciences the deficit can be reduced by approximately two thirds; at the Faculties of Medicine by 50 percent. At the technical universities, for which a very high space demand has been computed, the deficit can be reduced by approximately one third.

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(1) Bundesministerium für Wissenschaft und Forschung Längerfristiges Entwicklungsprogramm für den Hochschulbau, Vienna 1972

Space deficit by specialized areas

	space deficit m2 net useful area
humanities	26,000
natural sciences	62,000
technology	326,000
law, social and economic sciences	46,000
medicine	98,000

Expansion in the field of personnel

If one assumes that the existing staffing ratios (see 2.10.1) are maintained, the demand for posts of all categories would tremendously increase by the beginning of 1980. It would be necessary to provide for a total of 400 - 600 additional professorships by 1981, including posts for associate professor under sec. 10 of the University Organization Act. During the same period the number of assistantships would have to be increased by 2,000 - 3,000, that of the non-scientific personnel by 1,000 - 2,000.

Such an increase in the number of authorized posts is difficult to achieve. Permanent increases will be possible only if the posts are distributed in such a way that the difference in the number of personnel available for the individual specialized fields and universities can be balanced. Therefore the allotment of posts will have to be task- and efficiency-oriented to an increasing degree. It will be possible to allot posts to individual educational and administrative institutions only after the actual and probable efficiency of the institution at a given number of personnel has been examined.

Difficulties in increasing the number of personnel result from the necessity of further utilizing the "pool" of young scientists which has already been considerably resorted to because of the tremendous expansion in the field of higher education over the past few years. Insufficient qualification might be the consequence in individual cases.

In order to relieve the teaching staff, an intensified expansion in the number of administrative personnel is envisaged. Particularly the large-scale departments provided for in the University Organization Act will constitute a prerequisite for a rational use of better qualified administrative personnel also on the departmental level.

Expansion of libraries

The present uncoordinated system of university libraries, Faculty libraries and departmental libraries at the universities is to be replaced by a coordinated and integrated library system organized according to uniform principles and on the basis of the latest findings in the field of library science. In view of the steadily increasing production of scientific literature, such a new system should help to relieve members of the teaching staff in their administrative library work; furthermore, it should guarantee, by the rational use of the limited funds available for scientific literature, that the university members be sufficiently and rapidly supplied with the literature required for teaching and research, but also for study purposes.

This objective is to be achieved by a coordinated acquisition policy and a better use of the available library holdings on the basis of central indexes and a flexible placement of books. This approach will permit fast access to topical literature. Holdings that are no longer or only rarely used can be stored in central depots, whereby teaching and research would be relieved. In this context one has to take into consideration that the book and the periodical are no longer the only means of providing scientific information. There are also a number of other, above all audio-visual, media which will play an increasingly important role in the future. In addition, it is no longer possible for the individual scientist to survey the entire literature even of his own subject; a fact which necessitates a differentiated access to literature and a selective communication of information. These tasks, however, cannot be fulfilled without using the most up-to-date technical facilities, which, however, can be economical only in large-scale systems.

It will be necessary to reduce or eliminate the disadvantages of uncoordinated university library systems without having to give up the advantages, namely, the proximity of special library facilities to the teaching and research facilities.

The following objectives are to be achieved in order to increase library efficiency:

a) concerning the further development of library holdings
  - setting of priorities;
  - coordination, particularly in the acquisition of periodicals. The prerequisites are central records, which at the same time facilitate the access to certair titles. Uniform rules for the nominal cataloguization at all libraries concerned will help to achieve this task

b) concerning the access to literature
  - expansion of central literature records;
  - specific information (e.g., through documentation services)

c) concerning the acquisition of literature
  - accelerated cataloguing of books;
  - open-shelf placement;
  - reduction of waiting time if books are ordered from the depot;
  - expansion of the lending service and telex networks of the libraries.

These objectives are to be achieved by:

- integration (within the individual universities);
- coordination and cooperation between all scientific libraries of Austria;
- description of library functions;
- utilization of outside services (at home and abroad);
- re-organization and expansion of existing facilities such as the central catalogues;
- documentation services;
- provision of spatial prerequisites for
  a) a rational working process;
  b) an optimal user service;
- improvement of the internal organization;
- use of technical facilities;
- rational use of personnel;
- improvement of the training and specific further education of the library personnel;
- creation of the necessary legal bases (University Organization Act).

Expansion of EDP in the fields of administration, research and teaching

As laid down in the law, the main tasks of the university computing centres relate to teaching, research, university administration and scientific library and documentation systems. The planning of the future development of EDP in the scientific-academic realm is facilitated by the fact that at present each Austrian institution of higher learning has an inter-Faculty computing centre which is responsible for the specific planning, coordination and control of all EDP matters concerning the universities. Since 1970 the main instrument for medium-term planning has been a two-year prognosis of the quantitative demand. Its main item is a trend extrapolation of the user statistics per university.

Thus, it has so far been possible to localize demand peaks and to initiate measures in time. The establishment of a computer network, consisting of two large-scale computers, in the Vienna area has, for instance, helped to improve - for the next few years - the situation in a region which comprises about 50 percent of all Austrian students and university departments.

Together with the advance in the hardware technology and with the development and differentiation of software products, but also because of the diversification of individual tasks, the qualitative user profiles in the scientific-academic realm have developed very heterogeneously. Quantitative demand prognoses alone will thus not suffice in the future for decisions as to investments in the university EDP sector. However, according to the empirical material available, Vienna, Graz, Linz and Innsbruck, the "academic centres", will be those four main places where large-scale computers with sufficient capacity will be available for quantitative demand peaks (computing time and capacity). Thus, a large proportion of EDP activities which result from"research and development", namely about 70 percent of the entire volume of activities, can be fulfilled. Since research and development tasks are generally not bound to certain time limits for their completion smaller universities or institutions outside, too, can share the services of the four large-scale computing centres with reasonable response times. The situation will be improved for external users by the gradual expansion of terminal networks around the existing four junctions, whereby the possibility of data teleprocessing will be offered.

Most of the teaching tasks or activities in the field of university administration have to be fulfilled within a certain period of time. Furthermore, the respective educational aims would require that the student be guaranteed access to the computer as far as possible in EDP practicals, etc.

For EDP-intensive study programmes (e.g. informatics) a certain decentralization of EDP intelligence will be required in addition to the existing large-scale computing centres (e.g. information-science computing cores for hardware-related practicals, intelligent data stations for student training, etc.). The tasks in the fields of "university administration" and "library and documentation systems" are occasionally bound to certain time limits and also require large mass memories for the storage of the necessary data banks. This presupposes the establishment and reservation of special mass memories, which can, however, be concentrated in one university town. The Technical University of Vienna and the University of Vienna have EDP installations that are by far the largest and most efficient in the entire scientific-academic realm: With due consideration of the technical and organizational possibilities it is planned to concentrate EDP activities concerning the university administration at the Technical University of Vienna and those concerning the "library and documentation systems" at the University of Vienna.

Furthermore, the access to the data banks or to programme libraries over major distances necessitates the rapid expansion of technical communication facilities between the various university computing centres. The international trend toward reduced hardware costs has enhanced the possibilities of a somewhat more generous establishment of intelligent peripheral equipment that would also meet user demands to a greater extent. This applies in particular to the field of process control computers, where already today the use of micro-process control computers permit a meaningful process-dependent real-time processing.

The medium-term aim is the establishment of an Austrian computer network which constitutes a technical and economically optimal balance between the high degree of decentralization of scientific users and the need for technical and organizational concentration in the operation of EDP installations. Especially for the field of research such a computer network will be of great importance, as this is the only guarantee for an optimal access to the entire hardware and software facilities available in Austria. The fundamentals for planning an Austrian computer network in the scientific-academic realm will be elaborated by the Institute for Information Processing of the Austrian Academy of Sciences in cooperation with the International Institute for Applied System Analysis and the respective Austrian university departments.

Rationalization of teaching and instruction

The rationalization of teaching and instruction will require more attention. It remains to be reviewed which opportunities are offered. Measures will be necessary in the following areas:

- Cooperation and coordination of the individual educational facilities;
- division of labour among the teaching staff;
- testing of new teaching methods that require fewer teachers;
- quantitative and qualitative increases in the teaching efficiency by removing certain administrative tasks;
- increase in the students' academic performance.

The rationalization of teaching and instruction will be an essential aspect of the continued study reform in several respects:

- testing untraditional forms of university training incurring lower costs;
- didactic innovations;
- constant review of the contents of training and education with regard to their necessity;
- evaluation of the "rationality" of qualification levels.

Finally, the academic success of students will also have to be ensured by the integration effects of an educational reform which will mainly have to concentrate on the encouragement of primary motivations.

The increase in the academic success, i.e., an increase in success rates as well as a reduction in the duration of studies, is an important responsibility. For this purpose the study flow statistics is being expanded. At present, some investigations into the reasons for study failures are being carried out which should permit the weighting of the causes.

The large percentage of study failures as demonstrated by the drop-out rates, indicates for example - even without weighting - that the problem of study failures must be considered to be also a problem of the institutions and not only of the individual student.

In solving this issueaclose interdependence between the teaching efficiency of the institutions of higher learning and the academic success of students must be assumed to exist.

Positive measures to raise the academic success of students are the following:

- facilitating the change-over from secondary-schools to the requirements of university studies;
- improving academic counselling to avoid the choice of a wrong study programme and to inform about the general and specific requirements of certain studies;
- improving counselling on the requirements of talent, and
- increasing the use of learning aids.

It will be necessary to examine the extent to which the academic success of the individual student can be increased outside formalized teaching by training him in learning techniques as well as in methods of scientific work, by the promotion of new forms of learning, e.g., informal work groups, and by counselling.

7.2.3 Continuation of the study reform and expansion of the training programmes offered at institutions of higher learning

In addition to expansion and rationalization, the developmen of institutions of higher learning will have to center around the continuation of the study reform and the expansion of the education offered at universities.

The programme of continuing the study reform is closely connected with the above-mentioned development perspectives and a number of other problems, namely:

1. orientation of university planning to the educational demand;
2. rationalization of teaching and instruction;
3. inhomogeneity of the qualitative educational demand;
4. inhomogeneity of the student population with respect to their social backgrounds;
5. differentiated requirements of the labour market;
6. partial social disintegration of certain parts of the student population;
7. high drop-out rates and long duration of studies;
8. involvement of new target groups in university education - under the aspects of equal opportunities and adult education;
9. importance of new educational objectives.

The continuation of the study reform

The legal reform of regular degree studies is virtually completed. However, the objectives of the studies acts and the General University Studies Act have not yet been fully implemented in all areas. The basic concept of the study reform is not that of a limited reform, but provides for a constant adaptation process to new requirements. Other aspects of the university reform, such as rationalization of teaching and instruction, are also important for the continuation of the study reform.

A reform of university studies is not a one-time event: it calls for a constant adaptation of the study regulations to changed conditions, above all, to the progress of science and new professional requirements. For this purpose we need a continuous flow of relevant information within and outside the realm of higher education. New techniques must be developed for the interpretation and continuous evaluation of such data. Specific agencies must be entrusted with these tasks in order to guarantee that the relevant conclusions will immediately lead to amendments of the study regulations and thus help to improve the actual course of studies. The collection and processing of data presupposes, however, certain administrative reforms.

As concerns diploma studies the following demands have to be made:

- continuous revision of curricula with regard to new scientific findings and methods and the requirements of the labour market;
- increased usability of education and training with regard to subject matter and the actual implementation of educational objectives.

The explanatory notes to the General University Studies Act list a number of such educational objectives.

In the future, the emphasis will have to shift from the availability of factual knowledge to the capability and readiness to learn and to apply new findings. Students have to be taught new methods and techniques to apply scientific findings, they must learn the principles of interdisciplinary teamwork, and acquire the ability to critically formulate problems and find new solutions for them. The problems caused by the use of scientific findings extend also to the consequences of the application of science. In the future, it will be indispensable to establish a closer relation between university education and practical needs and professional requirements. This applies in particular to the introduction of new diploma studies.

These new studies will usually be characterized by a differentiation as to professional fields rather than scientific disciplines. Consequently, new study programmes will overlap to a larger degree than so far. New study programmes that develop out of the differentiation process within a discipline will have to be closely investigated as to the extent to which the educational contents of the original study programme are actually needed.

Under the General University Studies Act the scientific character of doctoral studies should be further emphasized. They are full-time studies with a high scientific standard. Their main function is the training of the young scientists for the university and for extra-university research. Doctoral studies, however, impart only to a limited extent the specialization necessary for the respective professional careers. New forms of studies, designed to further specialization as to subject matter and future professions, e.g., post-graduate studies, must be tested.

The General University Studies Act also stipulates that the university has to educate graduates in such a way that they can assume special political and social responsibility. These educational objectives imply the universities' responsibility for political education; at present, however, the university fulfills this task only to a very limited extent

The political behaviour of the students is generally characterized by disinterest and disengagement. On the other hand, however, extreme political attitudes arise out of a polarization of students' and university teachers' attitudes. The frequently changing ideologies of the social and political student movements show how difficult it is for the students to find a standpoint that corresponds to reality.

The universities' tasks in respect of political education must not be understood in the sense of a political engagement and ideologization of the universities.

Precedence must be given to discussion: With a view to their future professional and social positions the students should acquire a better understanding of the socio-political events and developments. For the scientific education, this means a discussion of the relation between science and politics and the economic and social utilization of science and scientific qualification. By integrating the students into decision-making processes within the university, the students should be able to develop their ability and willingness to participate and share responsibilities.

Generally speaking, the offerings in the "Hochschulkurse" and "Hochschullehrgänge" are rather limited at present. It will be an important task of the universities to reduce this deficit in the field of adult education, post-graduate studies and further education of students and graduates.

An exchange of information between universities that have already some experience with such programmes and those that do not will play an important role.

A reform of didactics will be an important tool for the continuation of the study reform and the rationalization of teaching and instruction.

University didactics allows for a scientific approach to the reform; thus didactics plays an important role in university organization and is essential for the self-realization of teachers and students. It should assist above all in the development of curricula and teaching methods. Furthermore, it should help prepare scientists for future teaching activities and allow for an analysis of student expectations as to subject matter. University didactics should not be understood as a meta-science of teaching and the selection of subject matter. It is a field of the social sciences and deals with the cognitive process at the university level and consequently with the concept of qualification itself. This integration into the practical context of qualification objectives and study practice is essential since a reduction of university didactics to pure methodology would be senseless; it would reduce it to a hybrid control ideology of the entire teaching process. (See the planned establishment of departments for university didactics in the government bill of a University Organization Act)

The study commissions will continue to play a decisive role in the study reform. For this purpose the commission members must receive further training. The possibility of a low-cost unbureaucratic information system of the commission members should be investigated.

7.2.4 Second phase of the study reform

The reform of the present regular studies has been concluded as concerns the legal foundations. Now the reform has to be implemented. Then,a second phase of the study reform will have to be initiated in order to expand the education offered at the universities. This expansion will have to be examined in the light of all education and training functions of the universities: professional training, recruitment of young scientists, education through science and the further education at universities.

The concrete types, the scope and institutional bases of those new educational programmes will have to be discussed within the realm of educational policy. Such a discussion will probably include all aspects of the structure of university training, i.e., access, duration of training, professional orientation of the training programmes, participation in university studies, teaching and studying techniques, degree of specialization of the training programmes, qualifications, proof of academic success, the position of research in training, etc.

It is necessary to avoid wrong investments, to be able to revise measures and to guarantee that new creative solutions can actually be realized; in order to do this we have to undertake study experiments in a broad sense and collect empirical data.

Study experiments

The university development until 1980 will be characterized by an experimental phase with new types of training programmes. The study experiments to be undertaken will have to be geared mainly to the qualitative aspects of the educational demand and the need for university graduates. These study experiments start from the assumption that all aspects of the present educational structure must be regarded as variables. These experiments, which must have highly innovatory features, must go beyond the present study experiments which permit only variations in the combination of subjects, but are otherwise integrated into the regular degree studies. The study experiments must be undertaken at institutions of higher learning; however, a coordination with school experiments outside the universities will be indispensable.

These new study experiments must be supervised scientifically and subjected to a rigid control as to their success; whether or not this requires a separate institution remains to be investigated.

It should also be investigated to what extent existing models can be used for these study experiments. At the same time demand investigations should be made with particular reference to the qualititive aspects of the demand for university graduates. The study experiments must be based on the latest findings in didactics, educational economy and curriculum research.

The following types of studies should be taken into consideration: part-time studies for employed persons, distan studies, short-cycle studies, special job-related studies, project studies, etc.

Experiments should be made with all types of studies to the extent that they can be justified by the demand for university graduates, as such experiments render valuable empirical data.

From the point of view of feasability and the wish to minimize negative effects study experiments should not be carried out on a large scale. Therefore, a decisive expansion of education and training by means of successful study experiments is a long-term perspective. The continuation of the study reform in the present educational structure and the reduction of educational deficits within the framework of the present supply structure becomes thus even more significant.

The problems of the innovation of university studies can be summarized as follows: Such problems must be dealt with by all groups concerned with teaching at the university (professors, academic intermediary staff, students); these joint efforts to solve the problems of the study reform can be institutionalized in an adequate manner. The formulation of study regulations should be a cooperative venture of the institutions of higher learning, the university administration and the legislator with the participation of the social partners. The continuous adaptation of the study regulations to the rapid changes in modern society, in particular the development of science and the professional requirements, cannot be effected by empirical reports alone. Therefore, the information systems at the universities must be expanded in order to allow for a continuous observation of the study flow and the studying habits. Outside the realm of the university special importance must be attributed to the collection of sufficient information on professional requirements; these data must be gathered by scientific methods and must be subject to scientific examination. In the formulation of academic study regulations special weight must be given to didactic findings: University studies must be subject to scientific investigations to a much greater degree than to date.

Two experiments involving drastic changes have already been prepared:

a) admission to regular degree studies by the institutions of higher learning themselves through the university qualification test ("Hochschulreifeprüfung");

b) introduction of distant studies.

Access to the university through the university qualification test ("Hochschulreifeprüfung")

The Federal Ministry of Science and Research has submitted a draft of a Federal act on the experimental introduction of preparatory courses for a university qualification test.

This experiment is designed to regulate the access to universities of applicants without secondary-school leaving certificates.

"Sec.1, subsec. 1. In agreement with the Federal Minister of Education and Art, the Federal Minister of Science and Research shall provide for the experimental introduction of preparatory courses for a university qualification test in the academic years 1974/75 to 1979/80."

Already since 1945 persons without secondary-school leaving certificates have been granted access to specific university studies by a so-called "Berufsreifeprüfung", which, however, no longer meets current needs (see 2.2.5). Only a relatively small number of persons has ever utilized this opportunity; the number of those who have subsequently completed university studies is considerably smaller.

According to the bill ten-month preparatory courses for individual study programmes are planned in which the required knowledge for said programmes is imparted. No specific prior knowledge is expected for admission to these courses; the applicants, however, must pass an aptitude test. These ten-month (full-day) preparatory courses are concluded with a university qualification test.

After passing the university qualification test the candidates as well as the persons having passed the "Berufsreifeprüfung" will be entitled to enroll as regular degree students in a specific study programme.

The aptitude test will be held before a three-member selection commission. It is hoped that the respective full professors will assume this function. Detailed provisions for the curricula of preparatory courses as well as the mode of organizing the university qualification test will have to be laid down by the Federal Ministry of Science and Research in agreement with the Federal Ministry of Education and Art.

The reorganization of the "Berufsreifeprüfung", dating back to 1945, should, for the time being, not be affected by the present bill. It is planned to introduce an admission restriction for this method of attaining university qualification. Under sec. 2, subsec. 5, the total number of participants in the preparatory courses must not exceed five percent of the Austrian study beginners of the preceding academic year.

Distant studies

An Austrian distant study plan is being prepared. A work group, consisting of representatives of the universities, labour and management and other experts, gives advice to the Federal Ministry of Science and Research.

Distant studies will have the following three main objectives:

1. relief of existing educational institutions;
2. creation of additional study possibilities;
3. increased possibilities of access to the universities.

Ad 1). It is being investigated in which regular studies and in which sections of studies the use of distant study methods should be recommended. Controlled experiments are planned for mass subjects, for studies where de facto distant study methods are being applied, and in different branches of science. A detailed cost comparison with normal studies is being carried out. The quality of studies should be improved.

Exemplary teaching material should also have a feedback effect on the normal type of studies.

Ad 2). At first the introduction of post-graduate studies is planned. Based on the new methods new study programmes should be introduced, which are not given much attention in traditional teaching.

The foremost principle is a high degree of professional orientation. These new studies are expected to be more attractive to persons already employed than traditional study programmes.

It is planned to start with specific experiments limited in scope.

Ad 3). An institution similar to the "open university" is not being discussed at present. The possibilities of preparatory courses for the admission to regular degree studies without secondary-school leaving certificates as well as the possible use of courses without admission restrictions (after the formal preparation) are being investigated. Unlike other efforts, these programmes are scientific in nature.

The activities are based on the international findings in this field. A different use of the individual media in the three fields mentioned above is most likely.

7.2.5 Organizational reform

The government bill of a University Organization Act is presently under parliamentary consideration.

The guiding principles of the organizational reform are:

- freedom of scientific research and teaching;
- the combination of research and teaching;
- the diversity of scientific teachings and methods;
- democratic participation and co-determination of all persons active at universities, according to qualifications (as demonstrated by equal representation of the groups concerned); i.e., democratic cooperation rather than hierarchical authority of full professors;
- the interaction of teachers and students in scientific teaching and research and in the formation of will of academic authorities;
- universities as socially responsible institutions in accordance with and - in the light of their importance for the scientific-technological development - as pioneers for the development of society;
- an organization which is not guided by traditions, but by the optimal use for research and teaching in order to increase efficiency;
- an administrative structure meeting present-day requirements and guided by the principles of economy, efficiency and low-cost operations, and finally
- the division of responsibility between university and society.

Organization and co-determination

In agreement with the official government statement of April 27, 1970, the principle of the reform of departments, Faculties and top university administration was incorporated in the draft of the University Organization Act, which is presently under parliamentary review, in the form of differentiated parities, especially in the commissions to be instituted at the Faculties' discretion. This reform principle is based on an organizational principle which ensures the participation and co-determination of all those involved in the scientific process according to qualifications, and which also guarantees the transparency of the process of will-formation and decision-making.

In the study commissions, which have generally proved to be successful, the one-third parity has been maintained in view of the tasks which are mainly connected with the studies per se.

The departmental organization provides that the department head - who is elected from among the full professors and who is responsible for the administration of the department - is assisted by the department conference. The department conference has to ensure the co-responsibility and co-determination of teachers and students engaged in the scientific tasks of the department, subject to their functions and qualifications: The number of assistants and students is equal to that of professors at the department; the department conference forms a quorum if at least 50 percent of its members are present.

The collegiate body of a Faculty may institute standing and non-standing commissions with the authority to pass decisions on all matters delegated to them. Above all, provision is made for special commissions, budget and planning, staff, habilitation and appointment commissions. Additional commissions are assigned inter-Faculty and inter-university tasks. These authorized commissions are to be instituted at the discretion of the individual collegiate bodies of Faculties on the condition that all groups are represented, however, without a majority of one group.

Within the planned university organization with its special emphasis on the Faculty, it will be possible to apply the principle of the division of labour. Thus, the present Faculty is of an intermediary size between that existing up to now - many times considered too large - and the Faculty under discussion.

At the same time, however, the principle of the division of labour by delegation is realized in the model of commissions authorized to pass decisions (Even up to now, most collegiate bodies have worked with commissions, which, however, have had no power of decision). Thus, the collegiate body of a Faculty will meet less frequently than to date; extremely long meetings of the Faculty, which have been considered a burden, should be avoided. By authorized commissions, operating on the principle of the division of labour, meetings should be reduced to the necessary minimum; moreover, this should ensure that the commission members be more familiar with the respective issues. Ultimately, in the Academic Senate, the supreme collegiate body and supreme academic authority, all persons active at the university are represented in a well-balanced parity.

The bodies at the universities will also include two representatives of the non-scientific personnel. This provision meets the requirement for co-determination of all persons active at the universities.

Co-determination as provided for in the draft of a University Organization Act reflects the appreciation for a principle of university policy, on the one hand, and a broade basis for an efficient decision-making process and the co-determination of all persons active at the universities in teaching and research, on the other.

Under the new University Organization Act, all degree-granting institutions of higher learning should be named "universities". Thus, the University Organization Act is not only a response to the requests of the competent academic authorities and the Conference of University Rectors, but also takes into account the progress of science, i.e., a broadening of the "universitas" of science, its diversification, differentiation and specialization. As already mentioned, the size of a Faculty lies between that of the present traditional Faculty, which in many cases is considered to be too large and only conditionally operational, and that of the specialized area, which is referred to as Faculty in the draft under discussion. The proposed division of the Faculty was made after discussions and hearing the competent academic bodies.

The new structure of universities will be based on three cooperative levels:

On the lowest level - the department - all scientific teaching and research tasks of the respective department, and related administrative tasks in connection with them are performed. The departments are the smallest independent organizational units for teaching and research; as such they are those institutions where the actual scientific work, i.e., looking for scientific findings, teaching, i.e., scientific preparation for a profession, professional training and education through science as well as the training of young scientists are performed. According to the "detailed structure" of departments, divisions may be established for scientific priorities (specific teaching tasks, auxiliary and supplementary subjects, etc.) as well as work groups for the implementation of specific research projecets, university extension courses, etc.

All departments of a specialized area or a group of specialized subjects are incorporated in a Faculty. The collegiate body of a Faculty is the superordinate academic authority responsible for the handling of matters that are relevant to several departments, unless central bodies are competent. Undoubtedly, in the fields of both autonomous and government spheres of competence, the administrative responsibilities of the university are concentrated on the Faculty level. Therefore, as already mentioned, the principle of the division of labour is implemented by the authorized commissions. This principle offers the advantage of a more national administration on the Faculty level.

The Academic Senate as the supreme academic authority and the Rector are in charge of central university government. On this central level the planning, coordination and control of scientific research and teaching, the various activities of university institutions and university management are to be carried out.

The longer term of office of the Rector of the university is new; the direct functional term of office is two years, which are preceded by one year as pre-rector and followed by a year as pro-rector. Thus, a greater continuity of this managerial function is to be ensured in the interest of the university.

Administration

In the interest of a more efficient university administration central institutions, such as the Rector's Office, the Bursar's Office, etc., will be structurally reinforced and adapted to modern management principles; additional central facilities, such as data centres, large equipment divisions, research institutes, etc., are planned. Especially the central facilities of data centres and large equipment divisions, which already exist at some universities (e.g., at the Linz School) and Faculties,are expected to result in further rationalization and cost savings by the optimal use of devices and equipment. Above all, this hold true for especially comprehensive and expensive technical installations, the EDP centres, which are used both for scientific research and teaching and administrative tasks as well as for the library, documentation and information systems. The above advantages also refer to the use and the administration of other expensive larger technical installations and devices which are used at modern universities. The servicing of these devices and equipment by special large equipment divisions offers the following advantages over the present administration through individual departments (clinics): a more rational use by several departments - e.g., electron microscopy -, a better servicing and maintenance of such equipment as well as a greater reliability in the operation of equipment, and finally also a more rational use of personnel.

It is the aim of the university administration reform to entrust the universities with more tasks than so far and thus to strengthen their autonomy.

The Academic Council is a real link between the universities and the economy on the one hand and the state, economy and society, on the other; in the draft of the University Organization Act it has been structured in such a way that in addition to the groups active at universities also the major social strata are represented.

The universities are scientific institutions with a social responsibility; as such they should be integrated into society and its development and serve society as a whole.

7.2.6 Expansion of counselling services

Sections 2.3.2 and 2.5.4 report on the façilities and activities of student counselling services. Expectations for better orientation of students and better information of the public will be closely linked to the expansion and the changes of existing facilities and their methods. Detailed cost/efficiency considerations are still necessary.
It is certainly desirable to optimize the present counselling model in which various agencies give information on partial areas; it should be assimilated to the ideal type of an "integration model", in which the counselling task is efficiently fulfilled as a unit.

Practical experience has shown that no separation is possible between professional guidance and information, between academi counselling and information and between professional guidance and academic counselling.

The information and counselling activities should be gradually intensified:

1. profession and subject seen in the light of the demand for experts as opposed to individual talents and claims;
2. organization of studies, study programmes offered, administrative conditions for studying;
3. social, economic marginal conditions of studies.

Counselling should not only be directed toward university students or secondary-school pupils. If educational guidance should prove a suitable control instrument the social structure of the individual decision-making processes must be considered. Young people will hardly decide alone on their further course of education, but a number of opinion-leaders will exercise a considerable influence. The target group of "trainees" should not be limited exclusively to pupils and students. The possibilities of using also mass media have to be investigated.

Also the value of an "orientation semester", which is sometimes discussed, should be examined. This includes:

1. the obligation to make use of the counselling services;
2. the obligation to attend courses which deal with the requirements of studies;
3. the possibility of attending courses in the entire post-secondary field for which credit will be given at a later time.

7.2.7 Institutionalization of planning

The Federal Minister of Science and Research has the political responsibility for the institutions of higher learning and thus also for university planning. The infrastructure required for the planning activities (e.g., data bank, scientific intelligence) has been developed in the Federal Ministry of Science and Research and is being further expanded.

The University Organization Act will create the necessary prerequisites, so that decentralized planning and development activities are intensified at the universities or can be started in some fields. The right to make substantiated requests and to exercise planning functions, respectively, is envisaged for all levels.

There should be an interaction between initiatives taken in the individual fields at the universities and the overall planning activities of the Ministry.

It will be important to bring more rational elements into university development. Those who are responsible must be give more information, not only in the form of data, but also in the form of analyses. The decision aids the Ministry has at its disposal in responding to expansion proposals and other wishes will be expanded qualitatively and quantitatively. Guidelines and standards are being developed; they should become binding for the Ministry and the university in the course of time. This would bring about a situation where applications are made with the full understanding that they will be examined and evaluated on the basis of known criteria. The prestige of science and scientists will, at leas to some extent, no longer constitute the only argument.

ANNEX

1.1 INSTITUTIONS OF HIGHER LEARNING (Hochschulen und Universitäten)

UNIVERSITY OF VIENNA *(Universität Wien)*

1365 foundation

5 Faculties:
- Catholic Theology
- Lutheran Theology
- Law and Political Science
- Medicine
- Arts and Sciences

UNIVERSITY OF GRAZ *(Universität Graz)*

1585 foundation

4 Faculties:
1585 Theology and philosophy
1779 Law
1863 Medicine

UNIVERSITY OF SALZBURG *(Universität Salzburg)*

1623 foundation (comprised Faculties of Theology, Philosophy and Law)
1810 closing of the University of Salzburg
1962 re-establishment of the University of Salzburg
1962 teaching was taken up at the Faculty of Catholic Theology
1964 teaching was taken up at the Faculty of Arts and Sciences
1965 teaching was taken up at the Faculty of Law

Plans exist for the establishment of a Faculty of Medicine

UNIVERSITY OF INNSBRUCK *(Universität Innsbruck)*

1669 foundation

1826 re-established as a university with a Faculty of Law and a Faculty of Arts and Sciences

1857 Faculty of Theology

1869 Faculty of Medicine

1966 establishment of a Faculty of Civil Engineering and Architecture

1969 teaching taken up at the Faculty of Civil Engineering and Architecture

VIENNA ACADEMY OF FINE ARTS
(Akademie der bildenden Künste in Wien)

1692 foundation of the Academy, uniting several art schools

1872 reorganized under the name of "Academy of Fine Arts"

VIENNA SCHOOL OF VETERINARY MEDICINE (university status)
(Tierärztliche Hochschule in Wien)

1767 foundation of a *Pferdekur- u. Operationsschule* (Horse Treatment and Surgery School), which was renamed *k.k. Thierarzney-Institut* (Imperial and Royal Institute of Veterinary Medicine) in 1776.

1896 after several improvements reorganized as *k.u.k. Thierarzney-Institut und Thierärztliche Hochschule* (Imperial and Royal Institute of Veterinary Medicine and School of Veterinary Medicine)

1908 right to award the degree of doctor

1919 named "School of Veterinary Medicine"

GRAZ SCHOOL OF TECHNOLOGY (university status)

(Technische Hoschschule Graz)

1811 establishment of a school of science, which in
1814 was named *Joanneum*. From
1827 onwards special technological instruction was offered besides instruction in the sciences.
1864 introduction of a fundamentally new curriculum
1872 establishment of the Graz School of Technology (university status)
1955 three Faculties: Civil Engineering and Architecture
Mechanical and Electrical Engineering
Sciences

GRAZ SCHOOL OF MUSIC AND DRAMATIC ART

(Hochschule für Musik und darstellende Kunst in Graz)

1815 foundation of the music association for the Federal Province of Styria
1948 introduction of a seminar for music education
1963 taken over the Federal Government
1970 given the name of "Graz School of Music and Dramatic Art"
1965 establishment of the branch of the School in Oberschützen (Burgenland)

VIENNA SCHOOL OF TECHNOLOGY (university status)

(Technische Hochschule in Wien)

1815 foundation of a *k.k. polytechnisches Institut* (Imperial and Royal Polytechnical Institute), which already had the character of an institution of higher learning
1872 Act granting the Polytechnical Institute university status and giving it the name of "Vienna School of Technology"

1901 right to award the degree of doctor
1955 since that time the Vienna School of Technology has comprised the following three Faculties:
Civil Engineering and Architecture
Mechanical and Electrical Engineering
Sciences

VIENNA SCHOOL OF MUSIC AND DRAMATIC ART

(Hochschule für Musik und darstellende Kunst in Wien)

1817 foundation as a private four-year music school combined with a singing-school. It soon expanded into a regular conservatory
1909 taken over by the Government under the name of "Academy of Music and Dramatic Art"
1970 renamed "School of Music and Dramatic Art'

LEOBEN SCHOOL OF MINING AND METALLURGY (university status)

(Montanistische Hochschule Leoben)

1840 foundation of a *Steiermärkisch-Ständische Montananstalt* (Mining School of the Estates of Styria), which is considered to be the predecessor of the School of Mining and Metallurgy (university status)
1861 opening of the *k.k. Bergakademie* (Imperial and Royal Mining Academy)
1904 named "School of Mining and Metallurgy" (university status), granted the right to award the degree of doctor

VIENNA SCHOOL OF APPLIED ART

(Hochschule für angewandte Kunst in Wien)

1867	established as *Kunstgewerbeschule des Österreichischen Museums für Kunst und Industrie* (School of Arts and Crafts of the Austrian Museum for Art and Industry)
1970	renamed "Vienna School of Applied Arts"

SALZBURG SCHOOL OF MUSIC AND DRAMATIC ART "MOZARTEUM"

(Hochschule für Musik und darstellende Kunst "Mozarteum")

1870	establishment of the "International Mozarteum Foundation"
1880	transformed into a public music school
1914	transformation into a conservatory
1953	taken over by the Government
1970	named "Salzburg School of Music and Dramatic Art 'Mozarteum'"

VIENNA SCHOOL OF AGRICULTURE (university status)

(Hochschule für Bodenkultur in Wien)

1872	founded as *k.k. Hochschule für Bodenkultur* (Imperial and Royal School of Agriculture) for the study of agriculture
1875	a Department of Forestry was added, which in
1883	was followed by a Department of Agricultural Engineering
1906	right to award the degree of doctor

VIENNA SCHOOL OF ECONOMICS (university status)

(Hochschule für Welthandel in Wien)

- 1873 opening of the first independent School of Economics with university status at the *Wiener Handelsakademie* (Vienna Commercial School)
  - 1877 closing of that school
  - 1898 opening of an *Exportakademie* (School of Export), which in
  - 1919 was transformed into an institution of higher learning with university status and renamed "School of Economics"
  - 1930 the organization and the studies were newly regulated and the School was given the right to award the degree of doctor

LINZ SCHOOL OF SOCIAL AND ECONOMIC STUDIES (university status)

(Hochschule für Sozial- und Wirtschaftswissenschaften in Linz)

- 1962 foundation by a Federal Act
  - 1966 teaching taken up at the Faculty of Social Sciences, Economics and Law
  - 1969 teaching taken up at the Faculty of Technology and Science

SCHOOL OF EDUCATIONAL SCIENCES IN KLAGENFURT (university status)

(Hochschule für Bildungswissenschaften in Klagenfurt)

- 1970 foundation by a Federal Act
  - 1972 opened with university extension courses
  - 1973 commencement of regular studies

ANNEX OF TABLES

Table 1: Pupils and students in the field of post-secondary education since the school year and winter semester, respectively, of 1966/67

		Schuljahr bzw. Wintersemester							
		66/67	67/68	68/69	69/70	70/71	71/72	72/73	73/74
Wissenschaftliche Hochschulen, ord.inl.Hörer	insgesamt:	37899	41268	39377	40889	43122	46950	53158	58613
	davon weibl. abs.	9659	10355	9924	10464	10968	12719	15513	18309
	davon weibl. in %	25,5	25,1	25,2	25,6	25,4	27,1	29,2	31,2
Kunsthochschulen, ord.inl.Hörer	insgesamt:								2822
	davon weibl. abs.								1143
	davon weibl. in %								40,5
Pädagogische Akademien (1)	insgesamt:	145	445	2455	4954	5997	7947	8049	7243
	davon weibl. abs.	122	388	1753	3380	3819	5214	5665	5065
	davon weibl. in %	84,1	87,2	71,4	68,2	63,7	65,6	70,4	69,9
Berufspädagogische Lehranstalt (1)	insgesamt:	88	87	83	112	136	153	148	135
	davon weibl. abs.	88	86	83	112	136	153	148	134
	davon weibl. in %	100,0	98,9	100,0	100,0	100,0	100,0	100,0	99,3
Bundesseminar f.d. landwirtschaftl.Bildungswesen (1) (2)	insgesamt:	180	169	171	183	128	131	143	102
	davon weibl. abs.	124	101	107	117	63	78	88	47
	davon weibl. in %	68,9	59,8	62,6	63,9	49,2	59,5	61,5	46,1
Lehranstalt für gehobene Sozialberufe (1)	insgesamt:	150	167	143	163	175	240	321	429
	davon weibl. abs.	150	156	128	133	140	179	243	323
	davon weibl. in %	100,0	93,4	89,5	81,6	80,0	74,6	75,7	75,3
Medizinisch-technische Lehrgänge (1)	insgesamt:	552	562	590	588	633	632	777	
	davon weibl. abs.	512	531	557	555	604	606	740	
	davon weibl. in %	92,8	94,5	94,4	94,4	95,4	98,9	95,2	
Abiturientenlehrgänge an berufsbild.höheren Schulen (1)	insgesamt:	559	488	529	446	497	722	962	1045 (3)
	davon weibl. abs.	235	188	204	215	214	247	320	419
	davon weibl. in %	42,0	38,5	38,6	48,2	43,1	34,2	33,2	40,1
Insgesamt (4)	insgesamt:	39573	43186	43348	47335	50688	56775	63558	70389
	davon weibl. abs.	10890	11805	12756	14976	15944	19196	22717	25440
	davon weibl. in %	27,5	27,3	29,4	31,6	31,5	33,8	35,7	36,1

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(1) Da der Ausländeranteil an diesen Schultypen sehr gering ist, wurde dieser unberücksichtigt gelassen

(2) Einschließlich Kursteilnehmer

(3) Einschließlich der 71 Studierenden im zweijährigen Hotelfachlehrgang für Maturanten

(4) Bis auf 1973/74 ohne Kunsthochschulen

		Burgenland	Kärnten	Niederösterr.	Oberösterr.	Salzburg	Steiermark	Tirol	Vorarlberg	Wien	Insgesamt
Wissenschaftliche Hochschulen ord.inl.Hörer	m	-	126	-	2055	2192	8335	4784	-	22812	40304
	w	-	104	-	455	1642	3307	1715	-	11086	18309
	g	-	230	-	2510	3834	11642	6499	-	33898	58613
Kunsthochschulen ord.inl.Hörer	m	-	-	-	83	237	233	-	-	1126	1679
	w	-	-	-	56	189	161	-	-	737	1143
	g	-	-	-	139	426	394	-	-	1863	2822
Akademien u.verwandte Lehranstalten(1)	m	38	195	211	373	253	375	221	106	568	2340
	w	104	452	455	766	555	1016	368	113	1740	5569
	g	142	647	666	1139	808	1391	589	219	2308	7909
Pädagogische Akademien(1)	m	38	195	211	354	253	366	210	106	445	2178
	w	104	452	455	729	555	959	317	113	1381	5065
	g	142	647	666	1083	808	1325	527	219	1826	7243
Berufspädagogische Lehranstalten(1)	m	-	-	-	-	-	-	-	-	1	1
	w	-	-	-	-	-	-	19	-	115	134
	g	-	-	-	-	-	-	19	-	116	135
Bundesseminar f.d.landwirt. Bildungswesen (1)(4)	m	-	-	-	-	-	-	-	-	55	55
	w	-	-	-	-	-	-	-	-	47	47
	g	-	-	-	-	-	-	-	-	102	102
Lehranstalt f. gehobene Sozialberufe(1)(5)	m	-	-	-	19	-	9	11	-	67	106
	w	-	-	-	37	-	57	32	-	197	323
	g	-	-	-	56	-	66	43	-	264	429
Medizinisch-technische Schulen(1)(2)	m	-	5	-	1	6	5	1	-	19	37
	w	-	52	14	29	28	130	136	-	351	740
	g	-	57	14	30	34	135	137	-	370	777
Abiturientenlehrgänge an Handelsakademien(1)	m	-	12	30	-	24	25	20	14	40	165
	w	-	34	11	-	20	48	35	9	71	228
	g	-	46	41	-	44	73	55	23	111	393
Abiturientenlehrgänge u.Kollegs an höh.techn.u.gewerblichen Lehranst.(1)	m	-	-	61	28	41	111	-	-	252	493
	w	-	-	29	-	88	29	-	-	84	230
	g	-	-	90	28	129	140	-	-	336(3)	723(3
INSGESAMT	m	38	338	302	2540	2753	9084	5026	120	24817	45018
	w	104	642	509	1306	2522	4691	2254	122	14069	26219
	g	142	980	811	3846	5275	13775	7280	242	38886	71237

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(1) Da der Ausländeranteil an diesen Schultypen sehr gering ist, wurde er unberücksichtigt gelassen
(2) Zahlen von 1972/73
(3) Einschließlich der 71 Studierenden im zweijährigen Hotelfachlehrgang für Maturanten
(4) Einschließlich Kursteilnehmer
(5) Einschließlich Studierende in Vorbereitungslehrgängen

Table 3: Pupil and student rates (beginners) (1) in the field of post-secondary education in the school year 1973/74 or in the winter semester 1973/74 in the first semester or first year of training, respectively

	Anteil der Schüler bzw. Studierenden an der 18- bis unter 22jährigen Wohnbevölkerung (2)
	gesamt
Wissenschaftliche Hochschulen	2,301
Kunsthochschulen	0,151
Pädagogische Akademie	0,881
Berufspädagogische Lehranstalten	0,018
Bundesseminar für das landwirtschaftliche Schulwesen	0,009
Lehranstalt für gehobene Frauenberufe	0,077
Medizinisch-technische Lehrgänge	0,107
Abiturientenlehrgänge an Berufsbildenden höheren Schulen	0,218
Insgesamt	3,762

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(1) Erstinskribierende bzw. Erstsemetrige oder im ersten Ausbildungsjahr sich befindende Schüler und Studenten

(2) Fortschreibung der Volkszählung 1971

Table 4: Secondary school graduates by individuals type of schools

(Summer and autumn 1972, spring 1973)

Schulformen	männlich abs.	männlich ↓%	männlich %→	weiblich abs.	weiblich ↓%	weiblich %→	gesamt abs.	gesamt ↓%	gesamt %→
Allgemeinbildende höhere Schulen	5.668	63,4	51	5.486	8o,o	49	11.154	7o,6	1oo,o
Allgemeinbildende höhere Schulen (Langform)	4.546	5o,9	56	3.585	52,3	44	8.131	51,5	1oo,o
Humanistisches Gymnasium (Gymnasium alte Form)	766	8,6	85	134	2,o	15	9oo	5,7	1oo,o
Neusprachliches Gymnasium	1.o81	12,1	36	1.915	27,9	64	2.996	19,o	1oo,o
Realistisches Gymnasium (Realgymnasium)	1.416	15,8	83	283	4,1	17	1.699	1o,7	1oo,o
Naturwissenschaftliches Realgymnasium (Realschule)	1.o19	11,4	7o	433	6,3	3o	1.452	9,2	1oo,o
Mathematisches Realgymnasium	264	3,o	94	18	o,3	6	282	1,8	1oo,o
Wirtschaftskundliches Realgymnasium für Mädchen (Frauenoberschule)	-	-	-	8o2	11,7	1oo	8o2	5,1	1oo,o
Musisch-pädagogisches Realgymnasium	1.122	12,5	37	1.9o1	27,7	63	3.o23	19,1	1oo,o
Berufsbildende höhere Schulen	2.946	33,o	69	1.296	18,9	31	4.242	26,9	1oo,o
Höhere technische und gewerblichen Lehranstalt (1)	2.188	24,5	97	66	1,o	3	2.254	14,3	1oo,o
Handelsakademie	586	6,6	45	729	1o,6	55	1.315	8,3	1oo,o
Höhere Lehranstalt für wirtschaftliche Frauenberufe	-	-	-	419	6,1	1oo	419	2,7	1oo,o
Höhere land- und forstwirtschaftliche Lehranstalt (2)	172	1,9	68	82	1,2	32	254	1,6	1oo,o
Sonderformen der Allgemeinbildenden höheren Schulen	321	3,6	80	78	1,1	2o	399	2,5	1oo,o
Aufbaugymnasium und Aufbaurealgymnasium	133	1,5	86	22	o,3	14	155	1,o	1oo,o
Gymnasium und Realgymnasium für Berufstätige	188	2,1	77	56	o,8	23	244	1,5	1oo,o
Insgesamt	8.935	1oo,o	57	6.86o	1oo,o	43	15.795	1oo,o	1oo,o

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(1) Nach den Geschlechterproportionen der letzten Jahrgänge aufgeteilt

(2) Nach Schätzung des Bundesministeriums für Unterricht und Kunst (Abteilung III/6) aufgeteilt

Table 5: Number of secondary-school graduates, 1956 to 1973

Matura-Jahr	Allgemeinbildende höhere Schule Langform			Allgemeinbildende höhere Schule Kurzform			Allgemeinbildende höhere Schule			Berufsbildende höhere Schule (1)			Sonderform der Allgemeinbildenden höheren Schule (2)			Insgesamt		
	abs.	Ind.	in %	abs.	Ind.	in %	abs.	Ind.	in %	abs.	Ind.	in %	abs.	Ind.	in %	abs.	Ind.	in %
1956	3.148		55,3				3.148		55,3	2.429		42,7	113		2,0	5.690		100,0
1957	5.027		61,2				5.027		61,2	3.068		37,3	125		1,5	8.220		100,0
1958	6.322		59,2				6.322		59,2	4.231		39,7	119		1,1	10.672		100,0
1959	7.103		61,4				7.103		61,4	4.323		37,4	144		1,2	11.570		100,0
1960	7.087		60,5				7.087		60,5	4.456		38,0	175		1,5	11.718		100,0
1961	7.331		60,0				7.331		60,0	4.678		38,3	214		1,7	12.223		100,0
1962	7.516		60,4				7.516		60,4	4.641		37,3	281		2,3	12.438		100,0
1963	6.462		57,7				6.462		57,7	4.469		39,9	274		2,4	11.205		100,0
1964	5.654		55,3				5.654		55,3	4.294		42,0	281		2,7	10.229		100,0
1965	6.755		57,7				6.755		57,7	4.609		39,4	344		2,9	11.708		100,0
1966	7.155		55,1				7.155		55,1	5.462		42,0	375		2,9	12.992		100,0
1967	7.260		65,1				7.260		65,1	3.560		31,9	338		3,0	11.158		100,0
1968	6.964	100	55,7	1.418	100	11,3	8.382	100	67,1	3.731	100	29,9	386	100	3,1	12.499	100	100,0
1969	7.007	101	55,1	1.600	113	12,6	8.607	103	67,6	3.762	101	29,6	355	92	2,8	12.724	102	100,0
1970	8.329	120	57,6	1.824	129	12,6	10.153	121	70,2	3.884	104	26,9	425	110	[illegible]	14.462	116	100,0
1971	7.003	101	41,9	5.094	359	30,4	12.097	144	72,3	4.172	112	24,9	460	119	2,8	16.729	134	100,0
1972	7.969	114	50,2	3.129	221	19,7	11.098	132	69,9	4.424	119	27,9	358	93	2,3	15.880	127	100,0
1973	8.796	126	51,4	3.495	246	20,4	12.291	147	71,8	4.509	121	26,3	318	82	1,9	17.118	137	100,0

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(1) Inklusive Lehrerbildungsanstalten (bis 1967)

(2) Aufbaugymnasium und Aufbaurealgymnasium und Gymnasium für Berufstätige

Table 6: Students of all categories at the universities and art schools, winter semester 1973/74

Hochschule		Studierende insgesamt			Ordentliche Hörer			Außerordentliche Hörer			Gasthörer		
		zus.	m.	w.	zus.	m.	w.	zus.	m.	w.	zus.	m.	w.
Hochschulen insgesamt	zus.	74271	50967	23304	70878	48948	21930	2787	1627	1160	606	392	214
	Inl.	63462	43139	20323	61435	41983	19452	1558	854	704	469	302	167
	Ausl.	10809	7828	2981	9443	6965	2478	1229	773	456	137	90	47
Wissenschaftliche Hochschulen zusammen	zus.	69598	48413	21185	66850	46694	20156	2279	1395	884	469	324	145
	Inl.	60212	41236	18976	58613	40304	18309	1201	668	533	398	264	134
	Ausl.	9386	7177	2209	8237	6390	1847	1078	727	351	71	60	11
Kunsthochschulen zusammen	zus.	4673	2554	2119	4028	2254	1774	508	232	276	137	68	69
	Inl.	3250	1903	1347	2822	1679	1143	357	186	171	71	38	33
	Ausl.	1423	651	772	1206	575	631	151	46	105	66	30	36
Universität in Wien	zus.	24065	13729	10336	23177	13260	9917	616	300	316	272	169	103
	Inl.	21934	12392	9542	21335	12079	9256	362	170	192	237	143	94
	Ausl.	2131	1337	794	1842	1181	661	254	130	124	35	26	9
Universität in Graz	zus.	9096	5668	3428	8865	5518	3347	189	122	67	42	28	14
	Inl.	8178	4976	3202	8055	4906	3149	82	43	39	41	27	14
	Ausl.	918	692	226	810	612	198	107	79	28	1	1	-
Universität in Innsbruck	zus.	9149	6727	2422	8839	6537	2302	273	163	110	37	27	10
	Inl.	6650	4865	1785	6499	4784	1715	116	55	61	35	26	9
	Ausl.	2499	1862	637	2340	1753	587	157	108	49	2	1	1
Universität in Salzburg	zus.	4813	2809	2004	4369	2573	1796	415	217	198	29	19	10
	Inl.	4075	2325	1750	3834	2192	1642	218	119	99	23	14	9
	Ausl.	738	484	254	535	381	154	197	98	99	6	5	1
Technische Hochschule in Wien	zus.	6858	6293	565	6728	6178	550	127	112	15	3	3	-
	Inl.	6065	5578	487	6057	5570	487	5	5	-	3	3	-
	Ausl.	793	715	78	671	608	63	122	107	15	-	-	-
Technische Hochschule in Graz	zus.	4085	3887	198	4030	3835	195	55	52	3	-	-	-
	Inl.	3052	2903	149	3046	2899	147	6	4	2	-	-	-
	Ausl.	1033	984	49	984	936	48	49	48	1	-	-	-
Montanistische Hochschule in Leoben	zus.	752	725	27	707	693	14	31	18	13	14	14	-
	Inl.	562	539	23	541	530	11	20	8	12	1	1	-
	Ausl.	190	186	4	166	163	3	11	10	1	13	13	-
Hochschule für Bodenkultur in Wien	zus.	1360	1201	159	1244	1106	138	70	54	16	46	41	5
	Inl.	1129	993	136	1063	945	118	28	15	13	38	33	5
	Ausl.	231	208	23	181	161	20	42	39	3	8	8	-
Tierärztliche Hochschule in Wien	zus.	693	542	151	687	539	148	6	3	3	-	-	-
	Inl.	602	465	137	596	462	134	6	3	3	-	-	-
	Ausl.	91	77	14	91	77	14	-	-	-	-	-	-
Hochschule für Welthandel in Wien	zus.	5804	4512	1292	5367	4187	1180	425	313	112	12	12	-
	Inl.	5147	3974	1173	4847	3756	1091	291	209	82	9	9	-
	Ausl.	657	538	119	520	431	89	134	104	30	3	3	-
Hochschule für Sozial- und Wirtschaftswissenschaften in Linz	zus.	2668	2178	490	2599	2137	462	58	32	26	11	9	2
	Inl.	2573	2091	482	2510	2055	455	54	29	25	9	7	2
	Ausl.	95	87	8	89	82	7	4	3	1	2	2	-
Hochschule für Bildungswissenschaften in Klagenfurt	zus.	255	142	113	238	131	107	14	9	5	3	2	1
	Inl.	245	135	110	230	126	104	13	8	5	2	1	1
	Ausl.	10	7	3	8	5	3	1	1	-	1	1	-
Akademie der bildenden Künste in Wien	zus.	600	365	235	460	300	160	140	65	75	-	-	-
	Inl.	507	306	201	385	254	131	122	52	70	-	-	-
	Ausl.	93	59	34	75	46	29	18	13	5	-	-	-
Hochschule für angewandte Kunst in Wien	zus.	638	298	340	580	283	297	16	4	12	42	11	31
	Inl.	503	240	263	470	234	236	11	3	8	22	3	19
	Ausl.	135	58	77	110	49	61	5	1	4	20	8	12
Hochschule für Musik und darstellende Kunst in Wien	zus.	1963	1096	867	1692	980	712	202	79	123	69	37	32
	Inl.	1157	715	442	1008	638	370	125	62	63	24	15	9
	Ausl.	806	381	425	684	342	342	77	17	60	45	22	23
Hochschule für Musik und darstellende Kunst "Mozarteum" in Salzb.	zus.	754	354	400	705	342	363	44	12	32	5	-	5
	Inl.	439	242	197	426	237	189	9	5	4	4	-	4
	Ausl.	315	112	203	279	105	174	35	7	28	1	-	1
Hochschule für Musik und darstellende Kunst in Graz	zus.	545	335	210	445	262	183	79	53	26	21	20	1
	Inl.	481	299	182	394	233	161	66	46	20	21	20	1
	Ausl.	64	36	28	51	29	22	13	7	6	-	-	-
Hochschule für künstlerische u. industrielle Gestaltung in Linz	zus.	173	106	67	146	87	59	27	19	8	-	-	-
	Inl.	163	101	62	139	83	56	24	18	6	-	-	-
	Ausl.	10	5	5	7	4	3	3	1	2	-	-	-

Table 7: Austrian and foreign regular degree students at universities: by universities, Faculties and study programmes (winter semester 1973/74)

Hochschule, Fakultät, Studienrichtung	Inskriptionen ordentlicher Hörer		
	insgesamt	Inländer	Ausländer
Universität in Wien	23.177	21.335	1.842
Katholisch-theologische Fakultät	378	338	40
Katholisch-fachtheologische und selbständige Religionspädagogik	317	282	35
Kombinierte Religionspädagogik	61	56	5
Evangelisch-theologische Fakultät	68	59	9
Rechts- und staatswissenschaftliche Fakultät	3.831	3.689	142
Rechtswissenschaften	2.583	2.545	38
Staatswissenschaften	80	70	10
Soziologische Studienrichtung	203	192	11
Volkswirtschaftliche Studienrichtung	839	759	80
Sozial- und Wirtschaftsstatistik	126	123	3
Medizinische Fakultät	4.660	4.070	590
Philosophische Fakultät	14.146	13.088	1.058
Studium irregulare	94	91	3
Universität in Graz	8.865	8.055	810
Katholisch-theologische Fakultät	188	186	2
Katholisch-fachtheologische und selbständige Religionspädagogik	147	145	2
Kombinierte Religionspädagogik	41	41	-
Rechts- und staatswissenschaftliche Fakultät	1.823	1.620	203
Rechtswissenschaften	697	647	50
Staatswissenschaften	61	24	37
Volkswirtschaftliche Studienrichtung	132	91	41
Betriebswirtschaftliche Studienrichtung	933	858	75
Medizinische Fakultät	2.130	1.727	403
Philosophische Fakultät	4.673	4.475	198
Studium irregulare	51	47	4
Universität in Innsbruck	8.839	6.499	2.340
Katholisch-theologische Fakultät	522	263	259
Katholisch-fachtheologische und selbständige Religionspädagogik	460	222	238
Kombinierte Religionspädagogik	45	40	5
Philosophie an der Katholisch-theologischen Fakultät	17	1	16
Rechts- und staatswissenschaftliche Fakultät	1.868	1.331	537
Rechtswissenschaften	574	431	143
Staatswissenschaften	5	2	3
Volkswirtschaftliche Studienrichtung	431	263	168
Betriebswirtschaftliche Studienrichtung	805	601	204
Wirtschaftswissenschaftliches Studium	53	34	19
Medizinische Fakultät	2.120	1.700	420
Philosophische Fakultät	3.548	2.625	923

Tabelle 7: Fortsetzung

Hochschule, Fakultät, Studienrichtung	Inskriptionen ordentlicher Hörer		
	insgesamt	Inländer	Ausländer
Fakultät für Bauingenieurwesen und Architektur	781	580	201
Architektur	402	272	130
Bauingenieurwesen	329	259	70
Wirtschaftsingenieurwesen (Bauwesen)	10	10	-
Vermessungswesen	40	39	1
Studium irregulare	-	-	-
Universität in Salzburg	4.369	3.834	535
Katholisch-theologische Fakultät	340	286	54
Katholisch-fachtheologische und selbständige Religionspädagogik	253	211	42
Kombinierte Religionspädagogik	64	61	3
Philosophie an der Katholisch-theologischen Fakultät	23	14	9
Rechts- und staatswissenschaftliche Fakultät	506	406	100
Rechtswissenschaften	493	394	99
Staatswissenschaften	13	12	1
Philosophische Fakultät	3.446	3.087	359
Studium irregulare	77	55	22
Technische Hochschule in Wien	6.728	6.057	671
Fakultät für Bauingenieurwesen und Architektur	1.880	1.660	220
Architektur	1.110	994	116
Bauingenieurwesen	722	621	101
Raumplanung und Raumordnung	48	45	3
Fakultät für Maschinenwesen und Elektrotechnik	2.337	2.083	254
Maschinenbau	1.009	883	126
Elektrotechnik	1.298	1.188	110
Schiffstechnik	30	12	18
Fakultät für Naturwissenschaften	2.481	2.285	196
Technische Chemie	608	523	85
Technische Physik	504	483	21
Vermessungswesen	181	166	15
Lehramt für Mathematik, Darstellende Geometrie, Physik, Chemie an höheren Schulen	145	145	-
Gas- und Feuerungstechnik	8	6	2
Versicherungsmathematik	99	90	9
Technische Mathematik	444	431	13
Rechentechnik	159	134	25
Informatik	321	295	26
Geistes- und Naturwissenschaften (neu)	12	12	-
Studium irregulare	30	29	1

Tabelle 7: Fortsetzung

Hochschule, Fakultät, Studienrichtung	Inskriptionen ordentlicher Hörer insgesamt	 Inländer	 Ausländ
Technische Hochschule in Graz	4.o3o	3.o46	984
Fakultät für Bauingenieurwesen und Architektur	1.569	1.o62	5o7
Architektur	558	432	126
Bauingenieurwesen	7o9	393	316
Wirtschaftsingenieurwesen (Bauwesen)	179	136	43
Vermessungswesen	123	1o1	22
Fakultät für Maschinenwesen und Elektrotechnik	1.79o	1.375	415
Maschinenbau	439	33o	1o9
Elektrotechnik	789	612	177
Verfahrenstechnik-Papiertechnik	13o	83	47
Wirtschaftsingenieurwesen (Maschinenbau)	432	35o	82
Fakultät für Naturwissenschaften	671	6o9	62
Technische Chemie	291	243	48
Technische Physik	183	174	9
Technische Mathematik	197	192	5
Geistes- und Naturwissenschaften (neu)	-	-	-
Studium irregulare	-	-	-
Montanistische Hochschule in Leoben	7o7	541	166
Montangeologie	2	1	1
Angewandte Geophysik	-	-	-
Gesteinshüttenwesen	32	27	5
Bergwesen	86	64	22
Markscheidewesen	9	7	2
Erdölwesen	121	91	3o
Hüttenwesen	215	154	61
Montanmaschinenwesen	5o	48	2
Kunststofftechnik	157	118	39
Werkstoffwissenschaften	35	31	4
Studium irregulare	-	-	-
Hochschule für Bodenkultur in Wien	1.244	1.o63	181
Landwirtschaft	424	336	88
Forst- und Holzwirtschaft	182	155	27
Kulturtechnik und Wasserwirtschaft	333	316	17
Lebensmittel- und Gärungstechnologie	3o5	256	49
Studium irregulare	-	-	-
Tierärztliche Hochschule in Wien	687	596	91
Tierärztliche Studienrichtung	687	596	91
Studium irregulare	-	-	-

Tabelle 7: Fortsetzung

	Inskriptionen ordentlicher Hörer		
Hochschule, Fakultät, Studienrichtung	insgesamt	Inländer	Ausländer
Hochschule für Welthandel in Wien	5.367	4.847	520
Volkswirtschaftliche Studienrichtung	240	164	76
Betriebswirtschaftliche Studienrichtung	2.743	2.489	254
Handelswirtschaftliche Studienrichtung	1.581	1.424	157
Wirtschaftspädagogische Studienrichtung	460	455	5
Welthandelswissenschaften (Dipl.Kfm.)	343	315	28
Studium irregulare	-	-	-
Hochschule für Sozial- und Wirtschaftswissenschaften in Linz	2.599	2.510	89
Sozial-, wirtschafts- und rechtswissenschaftliche Fakultät	2.032	1.949	83
Rechtswissenschaften	428	427	1
Soziologische Studienrichtung	193	190	3
Sozialwirtschaftliche Studienrichtung	78	70	8
Volkswirtschaftliche Studienrichtung	111	104	7
Betriebswirtschaftliche Studienrichtung	958	895	63
Wirtschaftspädagogische Studienrichtung	235	234	1
Sozial- und Wirtschaftsstatistik	29	29	-
Technisch-naturwissenschaftliche Fakultät	565	559	6
Technische Physik	65	64	1
Lehramt für Mathematik und Physik an höheren Schulen	223	223	-
Technische Mathematik	84	83	1
Rechentechnik	19	19	-
Informatik	174	170	4
Geistes- und Naturwissenschaften (neu)	-	-	-
Studium irregulare	2	2	-
Hochschule für Bildungswissenschaften in Klagenfurt	238	230	8
Wissenschaftliche Hochschulen insgesamt	66.850	58.613	8.237

Table 8: Austrian and foreign regular degree students at the Faculties of Arts and Sciences: by subjects, (winter semester 1973/74)

	Insgesamt	Inländer	Ausländer
Universität Wien			
Philosophische Fakultät	14.146	13.088	1.058
Philosophie	464	413	51
Politische Wissenschaft	101	83	18
Soziologie und Kulturwissenschaft	210	198	12
Psychologie	1.257	1.135	122
Pädagogik	435	401	34
Ur- und Frühgeschichte	22	22	-
Alte Geschichte und Altertumskunde	13	13	-
Mittelalterliche Geschichte	20	19	1
Neue Geschichte	30	25	5
Wirtschafts- und Sozialgeschichte	34	32	2
Österreichische Geschichte	31	31	-
Osteuropäische Geschichte	6	3	3
Zeitgeschichte	9	8	1
Publizistik und Kommunikationstheorie	441	418	23
Volkskunde	72	67	5
Geschichte ohne nähere Angabe	917	889	28
Sozial- und Wirtschaftskunde	4	4	-
Klassische Archäologie und Antike Kunstgeschichte	64	48	16
Antike Numismatik	7	7	-
Mittelalterliche und Neuere Kunstgeschichte	8	7	1
Kunstgeschichte ohne nähere Angabe	338	307	31
Musikwissenschaft	213	196	17
Theaterwissenschaft	298	253	45
Allgemeine und indogermanische Sprachwissenschaft	18	9	9
Deutsche und nordische Philologie	1.237	1.157	8o
Klassische Philologie ohne nähere Angabe	25	24	1
Latein	117	116	1
Griechisch	5	5	-
Orientalische Philologie	1	-	1
Englische Philologie	985	948	37
Romanische Philologie ohne nähere Angabe	165	154	11
Französisch	4o7	397	1o
Italienisch	39	37	2
Spanisch	3	3	-
Portugiesisch	1	1	-
Slawische Philologie ohne nähere Angabe	95	74	21
Russisch	58	48	1o
Tschechisch	1	1	-
Slowenisch	2	2	-
Serbokroatisch	4	2	2
Übrige slawische Philologien	2	1	1
Byzantinistik und Neogräzistik	12	1o	2
Orientalistik	5	3	2
Arabistik und Islamkunde	15	13	2
Judaistik	14	9	5
Indologie und Altiranistik	22	22	-
Ägyptologie	9	8	1
Afrikanistik	8	8	-
Japanologie, Sinologie	47	38	9
Völkerkunde	122	104	18

Tabelle 8: Fortsetzung

	Insgesamt	Inländer	Ausländer
Mathematik	900	884	16
Logistik	24	22	2
Darstellende Geometrie	2	2	-
Astronomie	20	18	2
Meteorologie und Geophysik	53	49	4
Physik	464	432	32
Atomphysik	3	2	1
Chemie	529	485	44
Pharmakognosie	8	5	3
Geographie, Speläologie	361	351	10
Geologie	71	60	11
Mineralogie und Petrographie	29	16	13
Botanik	115	110	5
Biologie	183	175	8
Paläontologie	13	12	1
Zoologie	252	219	33
Anthropologie	24	19	5
Naturgeschichte ohne nähere Angabe	365	363	2
Leibeserziehung	406	398	8
Informatik	35	33	2
Pharmazie	772	722	50
Übersetzer- und Dolmetschstudium	847	699	148
Studienfach nicht angegeben	257	239	18

Universität Graz

Philosophische Fakultät	4.673	4.475	198
Philosophie	98	95	3
Soziologie und Kulturwissenschaft	1	1	-
Psychologie	277	255	22
Pädagogik	157	150	7
Alte Geschichte und Altertumskunde	2	1	1
Mittelalterliche Geschichte	1	1	-
Neue Geschichte	2	1	1
Wirtschafts- und Sozialgeschichte	3	3	-
Österreichische Geschichte	6	6	-
Volkskunde	33	33	-
Geschichte ohne nähere Angabe	275	270	5
Klassische Archäologie und Antike Kunstgeschichte	8	8	-
Kunstgeschichte ohne nähere Angabe	69	66	3
Musikwissenschaft	37	36	1
Allgemeine und Indogermanische Sprachwissenschaft	4	4	-
Deutsche und nordische Philologie	458	438	20
Klassische Philologie ohne nähere Angabe	6	6	-
Latein	52	52	-
Englische Philologie	525	517	8
Romanische Philologie ohne nähere Angabe	25	23	2
Französisch	130	129	1
Italienisch	33	33	-
Slawische Philologie ohne nähere Angabe	27	21	6
Russisch	6	6	-

Tabelle 8: Fortsetzung

	Insgesamt	Inländer	Ausländer
Orientalistik	5	4	1
Völkerkunde	2	2	-
Mathematik	519	514	5
Darstellende Geometrie	6	6	-
Astronomie	8	7	1
Meteorologie und Geophysik	1o	1o	-
Physik	143	134	9
Chemie	296	268	28
Pharmakognosie	2	-	2
Geographie, Speläologie	137	136	1
Geologie	4o	35	5
Mineralogie und Petrographie	8	7	1
Botanik	28	26	2
Biologie	118	111	7
Paläontologie	4	4	-
Zoologie	118	110	8
Naturgeschichte ohne nähere Angabe	185	185	-
Leibeserziehung	184	182	2
Pharmazie	296	288	8
Übersetzer- und Dolmetschausbildung	291	255	36
Studienfach nicht angegeben	38	36	2
Universität Innsbruck			
Philosophische Fakultät	3.548	2.625	923
Philosophie	60	44	16
Psychologie	411	181	230
Pädagogik	153	103	50
Ur- und Frühgeschichte	17	11	6
Alte Geschichte und Altertumskunde	4	4	-
Mittelalterliche Geschichte	1	1	-
Wirtschafts- und Sozialgeschichte	1	1	-
Österreichische Geschichte	2	2	-
Publizistik und Kommunikationstheorie	1	1	-
Volkskunde	10	7	3
Geschichte ohne nähere Angabe	185	110	75
Klassische Archäologie und Antike Kunstgeschichte	16	12	4
Kunstgeschichte ohne nähere Angabe	60	49	11
Musikwissenschaft	54	53	1
Allgemeine und indogermanische Sprachwissenschaft	20	12	8
Deutsche und nordische Philologie	337	245	92
Klassische Philologie ohne nähere Angabe	8	6	2
Latein	25	20	5
Griechisch	1	-	1
Orientalische Philologie	1	1	-
Englische Philologie	261	236	25
Romanische Philologie ohne nähere Angabe	17	13	4
Französisch	49	47	2
Italienisch	5	3	2
Spanisch	1	1	-
Slawische Philologie ohne nähere Angabe	6	5	1
Russisch	1	1	-

Tabelle 8: Fortsetzung

	Insgesamt	Inländer	Ausländer
Mathematik	304	265	39
Darstellende Geometrie	5	4	1
Astronomie	3	2	1
Meteorologie und Geophysik	18	13	5
Physik	193	164	29
Atomphysik	2	-	2
Chemie	198	161	37
Pharmakognosie	4	1	3
Geographie, Speläologie	133	102	31
Geologie	57	30	27
Mineralogie und Petrographie	11	6	5
Botanik	60	26	34
Biologie	137	102	35
Paläontologie	1	1	-
Zoologie	77	57	20
Naturgeschichte ohne nähere Angabe	51	48	3
Leibeserziehung	108	97	11
Pharmazie	292	245	47
Übersetzer- und Dolmetschstudium	138	102	36
Studienfach nicht angegeben	49	30	19

Universität Salzburg

Philosophische Fakultät	3.446	3.087	359
Philosophie	88	74	14
Politische Wissenschaft	116	97	19
Soziologie und Kulturwissenschaft	10	6	4
Psychologie	569	434	135
Pädagogik	113	81	32
Ur- und Frühgeschichte	5	5	-
Alte Geschichte und Altertumskunde	3	3	-
Mittelalterliche Geschichte	3	2	1
Österreichische Geschichte	6	5	1
Publizistik und Kommunikationstheorie	123	97	26
Geschichte ohne nähere Angabe	171	156	15
Klassische Archäologie und Antike Kunstgeschichte	9	9	-
Kunstgeschichte ohne nähere Angabe	65	55	10
Musikwissenschaft	68	59	9
Allgemeine und indogermanische Sprachwissenschaft	1	1	-
Deutsche und nordische Philologie	513	480	33
Klassische Philologie ohne nähere Angabe	5	5	-
Latein	33	32	1
Griechisch	5	5	-
Englische Philologie	465	454	11
Romanische Philologie ohne nähere Angabe	59	55	4
Französisch	144	136	8
Italienisch	12	8	4
Spanisch	5	4	1
Portugiesisch	2	-	2
Slawische Philologie ohne nähere Angabe	13	12	1
Russisch	13	13	-
Mathematik	156	154	2
Geographie, Speläologie	145	144	1
Geologie	2	1	1
Mineralogie und Petrographie	1	1	-
Botanik	40	34	6
Biologie	79	74	5
Zoologie	61	54	7

Tabelle 8: Fortsetzung

	Insgesamt	Inländer	Ausländer
Naturgeschichte ohne nähere Angabe	155	153	2
Leibeserziehung	149	148	1
Studienfach nicht angegeben	39	36	3
Philosophische Fakultäten insgesamt	25.813	23.275	2.538

Table 9: Comparative figures on Austrian regular degree students, non-degree students and auditing students, winter semesters 1955/56 to 1973/74 (universities)

Wintersemester	ordentliche Hörer		außerordentliche Hörer		Gasthörer		zusammen	
	absolut	Index	absolut	Index	absolut	Index	absolut	Index
1955/56	13.888	100	992	100	436	100	15.316	100
1956/57	14.103	102	1.041	105	383	88	15.527	101
1957/58	15.984	115	1.194	120	329	75	17.507	114
1958/59	19.078	137	1.563	158	322	74	20.963	137
1959/60	22.607	163	1.710	172	234	54	24.551	160
1960/61	27.237	196	1.255	127	237	54	28.729	188
1961/62	30.848	222	1.234	124	287	66	32.369	211
1962/63	33.984	245	1.371	138	287	66	35.642	233
1963/64	36.387	262	1.347	136	244	56	37.978	248
1964/65	37.366	269	1.605	162	168	39	39.139	256
1965/66	38.057	274	1.575	159	146	33	39.778	260
1966/67	37.899	273	1.885	190	175	40	39.959	261
1967/68	41.268	297	1.175	118	102	23	42.545	278
1968/69	39.377	284	1.029	104	309	71	40.715	266
1969/70	40.889	294	960	97	355	81	42.204	276
1970/71	43.122	311	1.031	104	286	66	44.439	290
1971/72	46.950	338	1.140	115	342	78	48.432	316
1972/73	53.158	383	1.340	135	423	97	54.921	359
1973/74	58.613	422	1.201	121	398	91	60.212	393

Table 10: Foreign students, 1955/56 to 1973/74

Wintersemester	ordentliche Hörer		außerordentliche Hörer		Gasthörer		zusammen	
	absolut	Index	absolut	Index	absolut	Index	absolut	Index
1955/56	4.000	100	153	100	17	100	4.170	100
1960/61	9.955	249	296	193	48	282	10.299	247
1962/63	10.270	257	466	305	47	276	10.783	259
1964/65	8.898	222	758	495	7	41	9.663	232
1966/67	9.297	232	742	485	30	176	10.069	241
1968/69	8.481	212	861	563	112	659	9.454	227
1969/70	8.119	203	943	616	135	794	9.197	221
1970/71	8.154	204	1.166	762	62	365	9.382	225
1971/72	7.920	198	1.306	854	68	400	9.294	223
1972/73	7.993	200	1.324	865	57	335	9.374	225
1973/74	8.237	206	1.078	705	71	418	9.386	225

Table 11: The ten countries from w-hre most of the foreign students come (universities, regular degree students, winter semester 1973/74)

Staaten	absolut	in Prozent
Bundesrepublik Deutschland	2.206	26,8
Italien	1.373	16,7
Griechenland	963	11,7
Iran	754	9,1
Jugoslawien	278	3,4
Türkei	247	3,0
USA	225	2,7
Finnland	147	1,8
Vereinigte Arabische Republik	146	1,8
Norwegen	133	1,6
Summe der zehn Länder	6.472	78,6
Ausländer insgesamt	8.237	100,0

Table 12: Foreign students at the individual universities (regular degree students, winter semester 1973/74)

Hochschulen	männlich	weiblich	gesamt	in Prozent	Ausländeranteil je Hochschule (in Prozent)
Universität Wien	1.181	661	1.842	22,4	7,9
Universität Graz	612	198	810	9,8	9,1
Universität Innsbruck	1.753	587	2.340	28,4	26,5
Universität Salzburg	381	154	535	6,5	12,2
Technische Hochschule Wien	608	63	671	8,2	10,0
Technische Hochschule Graz	936	48	984	11,9	24,4
Montanistische Hochschule Leoben	163	3	166	2,0	23,5
Hochschule für Bodenkultur Wien	161	20	181	2,2	14,6
Tierärztliche Hochschule Wien	77	14	91	1,1	13,3
Hochschule für Welthandel Wien	431	89	520	6,3	9,7
Hochschule für Sozial- und Wirtschaftswissenschaften Linz	82	7	89	1,1	3,4
Hochschule für Bildungswissenschaften Klagenfurt	5	3	8	0,1	3,4
Insgesamt	6.390	1.847	8.237	100,0	12,3

time (Austrians), winter semester 1973/74

Schulform	männlich absolut	männlich in %	weiblich absolut	weiblich in %	g e s a m t absolut	g e s a m t in %	Frauenanteil (in %)
Allgemeinbildende höhere Schulen	4.225	77	3.314	88	7.539	82	44
Gymnasium (alte Form)	37	1	18	.	55	1	33
Humanistisches Gymnasium	554	10	93	2	647	7	14
Neusprachliches Gymnasium	911	17	1.464	39	2.375	26	62
Realistisches Gymnasium	933	17	103	3	1.036	11	10
Gymnasium f.Studierende d.Musik	9	.	12	.	21	.	57
Realgymnasium (alte Form)	217	4	202	5	419	5	48
Naturwissenschaftl.Realgymnasium	789	14	331	9	1.120	12	30
Mathematisches Realgymnasium	175	3	8	.	183	2	4
Musisch-pädagog.Realgymnasium	575	11	661	18	1.236	13	53
Musisch-pädagog.Sportrealgymnasium	4	.	2	.	6	.	.
Realschule	21	.	7	.	28	.	25
Frauenoberschule	-	-	43	1	43	.	100
Wirtschaftskundl.Realgymnasium	-	-	370	10	370	4	100
Berufsbildende höhere Schulen	923	17	355	9	1.278	14	28
Höh.techn.u.gewerbl.Lehranstalt	557	10	19	1	576	6	3
Handelsakademien	274	5	193	5	467	5	41
Höh.Lehranst.f.wirtschaftl.Frauenberufe	-	-	111	3	111	1	100
Lehrerbildungsanstalt	31	1	28	1	59	1	47
Höhere land- u.forstwirtschaftl.Lehranstalt	61	1	4	.	65	1	6
Sonderformen der Allgemeinbild.höheren Schulen	191	3	30	1	221	2	14
Aufbaugymn., -realgymn., -mittelschule	61	1	8	.	69	1	12
Bundesgymn.u.Realgymn.f.Berufst., Arbeitermittelsch.	130	2	22	1	152	2	14
Sonstige Formen und keine Angabe der Schulform	126	2	77	2	203	2	38
Insgesamt	5.465	100	3.776	100	9.241	100	41

Table 14: Pre-university education of Austrian regular degree students registering for the first time, by groups of study programmes (w[illegible]er semester 1973/74)(in %)

			Theologie	Rechtswissenschaften	Sozial- und Wirtschaftswissenschaften	Medizin	Philosophie	Pharmazie	Übersetzer- und Dolmetschstud.	Techn.Studienrichtungen	Montanistik	Bodenkultur	Veterinärmedizin	Insgesamt
Allgemeinbildende höhere Schulen		m	84	89	50	95	86	88	72	69	62	72	72	77
		w	96	95	61	97	90	95	76	87	•	81	93	88
Humanistisches Gymnasium	d	m	47	12	4	17	10	11	8	6	1	12	4	10
		w	6	4	1	2	3	2	1	2	-	12	7	2
Neusprachliches Gymnasium	a	m	10	29	14	24	18	16	36	9	13	7	16	17
		w	37	51	29	54	37	48	39	28	•	19	30	39
Realistisches Gymnasium	v	m	7	14	8	22	16	25	8	23	28	19	12	17
		w	2	1	3	6	2	5	2	6	-	-	3	3
Naturwissenschaftl.Gymnasium	o	m	7	11	11	16	15	21	8	16	6	19	26	14
		w	6	10	5	11	8	11	5	20	-	19	17	9
Musisch-pädagog.Realgymnasium	n	m	6	11	5	11	19	11	8	5	7	6	7	11
		w	31	11	4	14	22	16	7	13	-	15	13	18
Wirtschaftskundl.Realgymnasium		m	-	-	-	-	-	-	-	-	-	-	-	-
		w	8	6	11	8	10	8	14	12	-	15	7	10
Berufsbildende höhere Schulen		m	3	2	42	1	8	2	24	28	29	25	15	17
		w	4	1	38	•	7	1	20	9	•	15	3	9
Höh.techn.u.gewerbl.Lehranstalt	d	m	-	1	15	-	3	-	8	26	28	11	1	10
		w	-	-	1	-	-	1	1	6	-	-	-	1
Handelsakademie	a	m	2	1	26	-	3	-	16	1	-	2	-	5
		w	2	-	32	•	2	-	10	2	-	4	3	5
Höh.Lehranstalt für wirtschaftliche Frauenberufe	v	m	-	-	-	-	-	-	-	-	-	-	-	-
		w	-	1	5	-	3	-	10	1	•	4	-	3
Höhere Land- und forstwirtschaftliche Lehranstalt	o	m	1	•	1	•	1	2	-	•	1	12	14	1
	n	w	-	-	-	-	•	-	-	-	-	8	-	•
Sonderformen der Allgemeinbildenden höheren Schulen		m	11	6	5	2	3	-	-	2	7	1	4	3
		w	-	3	•	1	1	-	1	1	-	-	-	1
Insgesamt		m	100	100	100	100	100	100	100	100	100	100	100	100
		w	100	100	100	100	100	100	100	100	100	100	100	100

Table 15: Regional origin by institutions of higher learning (Austrian regular degree students, winter semester 1973/74)

	Univ.Wien		Univ.Graz		Univ.Innsbr.		Univ.Sbg.		TH Wien		TH Graz		Montanist. HS Leoben		HS f.Bodenkultur		Tierärztl. HS		HS f.Welthandel		HS f.Soz.-u. Wirtschaftswiss.Linz		HS f.Bildungswiss. Klgft.		Insgesamt	
	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %
Burgenland	976 4,6	56,6	192 2,4	11,1	10 0,1	0,6	6 0,2	0,4	217 3,6	12,6	37 1,2	2,1	8 1,5	0,5	37 3,5	2,1	5 0,8	0,3	234 4,8	13,6	2 0,1	0,1	- -	-	1.724 2,9	100,0
Kärnten	1.146 5,4	24,6	1.527 18,9	32,8	261 4,0	5,6	220 5,7	4.7	282 4,7	6,0	482 15,8	10,3	67 12,4	1,4	77 7,2	1,7	47 7,9	1,0	327 6,7	7,0	21 0,8	0,5	206 89,6	4,4	4.663 8,0	100,0
Niederösterreich	4.676 21,9	58,7	53 0,7	0,7	115 1,8	1,4.	133 3,5	1,7	1.317 21,7	16,5	36 1,2	0,5	62 11,5	0,8	283 26,6	3,6	106 17,8	1,3	1.063 21,9	13,3	120 4,8	1,5	1 0,4	.	7.965 13,6	100,0
Oberösterreich	1.699 8,0	19,2	359 4,5	4,1	1.050 16,1	11,9	1.725 45,0	19,5	727 12,0	8,2	428 14,1	4,9	87 16,1	1,0	138 13,0	1,6	97 16,3	1,1	281 7,9	4,3	2.133 85,0	24,2	1 0,4	.	8.825 15,1	100,0
Salzburg	384 1,8	11,7	149 1,8	4,5	558 8,6	16,9	1.332 34,7	40,4	228 3,8	6,9	207 6,8	6,3	41 7,6	1,2	45 4,2	1,4	38 6,4	1,2	182 3,8	5,5	130 5,2	3,9	2 0,9	0,1	3.296 5,6	100,0
Steiermark	488 2,3	5,6	5.624 69,8	64,3	104 1,6	1,2	131 3,4	1,5	110 1,8	1,3	1.589 52,2	18,2	222 41,0	2,5	112 10,6	1,3	97 16,3	1,1	230 4,8	2,6	24 0,9	0,3	10 4,3	0,1	8.741 14,9	100,0
Tirol	155 0,7	4,0	37 0,5	1,0	3.190 49,1	81,2	92 2,4	2,3	158 2,6	4,0	135 4,4	3,4	16 3,0	0,4	23 2,2	0,6	27 4,5	0,7	84 1,7	2,1	12 0,5	0,3	- -	-	3.929 6,7	100,0
Vorarlberg	221 1,0	13,7	19 0,2	1,2	1.014 15,6	62,9	53 1,4	3,3	65 1,1	4,0	100 3,3	6,2	4 0,7	0,3	12 1,1	0,7	6 1,0	0,4	92 1,9	5,7	25 1,0	1,6	- -	-	1.611 2,7	100,0
Wien	11.424 53,5	65,7	47 0,6	0,3	82 1,3	0,5	104 2,7	0,6	2.929 48,3	16,8	16 0,5	0,1	30 5,5	0,2	326 30,7	1,9	163 27,3	0,9	2.224 45,9	12,8	29 1,1	0,2	8 3,5	.	17.382 29,7	100,0
Ausland (1)	166 0,8	34,8	48 0,6	10,1	115 1,8	24,1	38 1,0	8,0	24 0,4	5,0	16 0,5	3,4	4 0,7	0,8	10 0,9	2,1	10 1,7	2,1	30 0,6	6,3	14 0,6	2,9	2 0,9	0,4	477 0,8	100,0
Insgesamt	21.335 100,0	36,4	8.055 100,0	13,7	6.499 100,0	11,1	3.834 100,0	6,6	6.057 100,0	10,3	3.046 100,0	5,2	541 100,0	0,9	1.063 100,0	1,8	596 100,0	1,0	4.847 100,0	8,3	2.510 100,0	4,3	230 100,0	0,4	58.613 100,0	100,0

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(1) Wohnsitz der Eltern

Table 16: Ratio of male and female students at the individual universities (Austrian regular degree students, winter semester 1973/74)

Hochschulen	männlich		weiblich		gesamt		Anteil weiblicher Studierender (in %)
	absolut	in %	absolut	in %	absolut	in %	
Universität Wien	12.079	30,0	9.256	50,6	21.335	36,4	43
Universität Graz	4.906	12,2	3.149	17,2	8.055	13,7	39
Universität Innsbruck	4.784	11,9	1.715	9,4	6.499	11,1	26
Universität Salzburg	2.192	5,4	1.642	9,0	3.834	6,5	43
Technische Hochschule Wien	5.570	13,8	487	2,7	6.057	10,3	8
Technische Hochschule Graz	2.899	7,2	147	0,8	3.046	5,2	5
Montanistische Hochschule Leoben	530	1,3	11	0,1	541	0,9	2
Hochschule für Bodenkultur Wien	945	2,3	118	0,6	1.063	1,8	11
Tierärztliche Hochschule Wien	462	1,1	134	0,7	596	1,0	22
Hochschule für Welthandel Wien	3.756	9,3	1.091	6,0	4.847	8,3	23
Hochschule für Sozial- und Wirtschaftswissenschaften Linz	2.055	5,1	455	2,5	2.510	4,3	18
Hochschule für Bildungswissenschaften Klagenfurt	126	0,3	104	0,6	230	0,4	45
Insgesamt	40.304	100,0	18.309	100,0	58.613	100,0	31

Table 17: Occupation of the father (Austrian regular degree students, winter semester 1973/74)

	männl.	weibl.	gesamt	40- unter 65jährige männl.berufstätige Wohnbevölkerung nach Stellung im Beruf (2)
		in %(1)		
Selbständige und freiberuflich Erwerbstätige (ohne Landwirte)	22	25	23	12
Landwirte	6	4	6	12
Beamte	26		26	37
- höhere Beamte	9		10	
- mittlere Beamte	9	9	9	
- niedere Beamte	8	6	7	
Angestellte	30	32	30	
- Angestellte in Spitzenstellungen oder mit Hochschulbildung	12	14	12	
- Angestellte mit Matura	5	6	5	
- Angestellte ohne Matura	13	12	13	
Arbeiter	14	10	13	38
Schriftsteller, Politiker, Künstler	2		2	
Insgesamt	100	100	100	100

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(1) Prozentwerte ohne "keine Angabe" berechnet

(2) Volkszählung 1971

Table 18: Education of fathers 1956/57 to 1973/74 (Austrian regular degree students) (in %) (1)

abgeschlossene Schulbildung	1956/57	1959/60	1964/65	1967/68	1969/70	1970/71	1971/72	1973/74
Hochschule								
männlich	29	31	29	30	28	27	26	25
weiblich	42	45	42	41	37	36	35	34
gesamt	32	35	32	32	30	29	28	28
Mittelschule								
männlich	24	24	24	21	20	20	20	20
weiblich	25	26	25	23	22	23	23	22
gesamt	24	25	24	22	21	21	21	21
weder Hochschule noch Mittelschule								
männlich	47	44	47	49	52	53	54	55
weiblich	32	29	33	36	40	41	42	44
gesamt	44	40	44	46	49	50	51	51

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(1) Die Fälle "ohne Angabe" wurden anteilsmäßig aufgeteilt

Table 19: Graduations of Austrian regular degree students in the academic year 1972/73

	Promotionen			Diplomierungen u.sonstige Studienabschlüsse			Insgesamt		
	männlich	weiblich	gesamt	männlich	weiblich	gesamt	männlich	weiblich	gesamt
Theologie	17	2	19	141	7	148	158	9	167
Rechtswissenschaften	398	86	484	-	-	-	398	86	484
auslaufende Studienrichtungen	102	9	111	59	18	77	161	27	188
Sozial- und Wirtschaftswissenschaften	45	5	50	436	93	529	481	98	579
Medizin	368	160	528	-	-	-	368	160	526
Philosophie	371	205	576	268	381	649	639	586	1.225
Pharmazie	2	-	2	42	85	127	44	[illegible]	129
Übersetzer- u.Dolmetschstudium	-	-	-	5	25	30	5	25	30
Technische Studienrichtungen	103	2	105	658	34	692	761	36	797
Montanistik	18	-	18	41	-	41	59	-	59
Bodenkultur	17	1	18	122	11	133	139	12	151
Veterinärmedizin	17	3	20	24	4	28	41	7	48
Studium irregulare	7	6	13	3	1	4	10	7	17
Insgesamt	1.465	479	1.944	1.799	659	2.458	3.264	1.138	4.402

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auslaufende Studienrichtungen sind: Staatswissenschaft, Wirtschaftswissenschaft und Welthandelswissenschaft

Table 20: Graduations of regular degree students at the universities 1963/64 to 1972/73 (first possible level of graduation)

		absolut	in %
Theologie		437	1,3
Rechts- und Staatswissenschaften		6.277	18,6
Welthandelswissenschaften (Dkfm.)	- 3.446	4.810	14,3
Wirtschaftswissenschaften (Dipl.Vw.)	- 180		
Sozial- und Wirtschaftswissenschaften (Mag.rer.soc.oec.) (1)	- 1.184		
Medizin		4.287	12,7
Philosophie, Doktorat	- 4.860	6.776 (3)	20,1
Lehramt für höhere Schulen (2)	- 5.204		
Pharmazie		1.247	3,7
Übersetzer- und Dolmetschstudium		975	2,9
Technische Studienrichtungen (4)		7.321	21,7
Bodenkultur, Diplom		1.371	4,1
Tierheilkunde, Diplom		171	0,5
Studium irregulare		24	0,1
		33.696	100,0

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(1) Ohne Wirtschaftspädagogik

(2) Inklusive Wirtschaftspädagogik und Lehramt für Mathematik - Physik an Technischen Hochschulen

(3) Anzahl der Philosophie-Absolventen um 33 % Doppelabschlüsse (Lehramt + Doktorat) bereinigt

(4) Inklusive montanistische Studienrichtungen

Table 21: Graduates of the universities by fields of specialization (census 1971)

Fachgruppen	männlich (1)		weiblich (1)		gesamt (1)	
	absolut	in %	absolut	in %	absolut	in %
Theologie	6.439	8,2	120	0,6	6.559	6,6
Rechts- u.Staatswissenschaften	16.751	21,4	2.098	10,0	18.849	19,0
Sozial- u.Wirtschaftswissenschaften	1.772	2,3	369	1,8	2.141	2,2
Welthandelswissenschaften	6.189	7,9	1.655	7,9	7.844	7,9
Medizin	13.038	16,7	4.047	19,4	17.085	17,2
Philosophie	12.639	16,1	11.542	55,3	24.181	24,4
Technik	14.825	18,9	614	2,9	15.439	15,6
Montanistik	1.283	1,6	15	0,1	1.298	1,3
Bodenkultur	3.881	5,0	357	1,7	4.238	4,3
Tierheilkunde	1.458	1,9	68	0,3	1.526	1,5
INSGESAMT (2)	85.406	100,0	24.009	100,0	109.415	100,0

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(1) Prozentwerte ohne "keine Angabe" berechnet

(2) Einschließlich der Fälle ohne Angabe der Studienrichtung

Table 22: Figures on the total student population, beginners and graduates since the winter semester 1955/56 (Austrian regular degree students at the universities)

Studien-jahr	alle Hörer		Studienanfänger		Absolventen(1)		im Studienjahr
	abs.	Index	abs.	Index	abs.	Index	
1955/56	13.888	1oo	2.987	1oo	2.o36 (2)	1oo	1961/62
1956/57	14.1o3	1o2	3.1o6	1o4	2.278 (2)	112	1962/63
1957/58	15.984	115	4.472	15o	2.525	124	1963/64
1958/59	19.o78	137	5.693	191	2.891	142	1964/65
1959/6o	22.6o7	163	6.551	219	3.o6o	15o	1965/66
196o/61	27.237	196	7.o85	237	3.188	157	1966/67
1961/62	3o.848	222	7.3o3	244	3.376	166	1967/68
1962/63	33.984	245	7.265	243	3.594	177	1968/69
1963/64	36.387	262	6.796	228	3.721	183	1969/7o
1964/65	37.366	269	6.549	219	3.932	193	197o/71
1965/66	38.o57	274	6.671	223	3.775	185	1971/72
1966/67	37.899	273	6.843	229	3.634	179	1972/73
1967/68	41.268	297	6.946	233			
1968/69	39.377	284	7.517	252			
1969/7o	4o.889	294	7.796	261			
197o/71	43.122	31o	9.282	311			
1971/72	46.95o	338	1o.124	339			
1972/73	53.158	383	1o.92o	366			
1973/74	58.613	422	11.1o1	372			

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(1) Gesamtzahl der Studienabschlüsse minus Zahl der Zweitabschlüsse

(2) Verhältnisschätzung

September 1, 1974)

	O.+AO. LEHR-KANZELN	DAVON FREI	O. LEHR-KANZELN	DAVON FREI	AO. LEHR-KANZELN	DAVON FREI	AO.PROF PAP.10A HOG
UNIVERSITAET WIEN	281	23	280	23	1	-	56
KATH.THEOL.FAK.	15	1	15	1	-	-	-
EV.THEOL.FAK.	7	-	7	-	-	-	-
RECHT.STAAT.FAK.	42	5	42	5	-	-	2
MED.FAK.	61	6	60	6	1	-	32
PHIL.FAK.	156	11	156	11	-	-	22
UNIVERSITAET GRAZ	139	21	139	21	-	-	30
KATH.THEOL.FAK.	14	-	14	-	-	-	1
RECHT.STAAT.FAK.	34	8	34	8	-	-	2
MED.FAK.	27	6	27	6	-	-	8
PHIL.FAK.	64	7	64	7	-	-	19
UNIVERSITAET INNSB.	167	17	162	13	5	4	35
KATH.THEOL.FAK.	16	2	15	1	1	1	-
RECHT.STAAT.FAK.	30	3	29	2	1	1	2
MED.FAK.	36	5	33	3	3	2	17
PHIL.FAK.	61	3	61	3	-	-	16
FAK.F.BAU.U.ARCH.	24	4	24	4	-	-	-
UNIVERSITAET SALZB.	93	9	93	9	-	-	7
KATH.THEOL.FAK.	14	-	14	-	-	-	2
RECHT.STAAT.FAK.	25	3	25	3	-	-	2
PHIL.FAK.	54	6	54	6	-	-	3
TECHNISCHE HS WIEN	110	8	108	7	2	1	37
FAK.F.BAU.U.ARCH.	34	2	34	2	-	-	7
FAK.F.MASCH.U.EL.	34	3	32	2	2	1	8
FAK.F.NAT.WISS.	42	3	42	3	-	-	22
TECHNISCHE HS GRAZ	73	8	73	8	-	-	9
FAK.F.BAU.U.ARCH.	25	4	25	4	-	-	4
FAK.F.MASCH.U.EL.	28	4	28	4	-	-	2
FAK.F.NAT.WISS.	20	-	20	-	-	-	3
MONTAN. HS LEOBEN	31	2	31	2	-	-	7
HS F. BODENKULTUR	40	3	39	2	1	1	8
TIERAERZTLICHE HS	22	2	22	2	-	-	2
HS F. WELTHANDEL	44	7	44	7	-	-	1
HS F. SOWIWISS. LINZ	60	8	60	8	-	-	1
SO.WI.RE.FAK.	39	4	39	4	-	-	-
TECH.NAT.FAK.	21	4	21	4	-	-	1
HS F. BILDUNGSWISS.	20	7	20	7	-	-	-
WISS. HS ZUSAMMEN	1000	115	1071	109	9	6	193

Table 24: Number of chairs at universities according to schema of authorized posts, 1966 - 1974

Hochschule	1966	1967	1968	1969	1970	1971	1972	1973	1974
Universität Wien	203	219	234	241	248	254	268	277	281
Universität Graz	102	111	116	118	118	125	132	137	139
Universität Innsbruck	112	123	137	143	146	150	163	167	167
Universität Salzburg	44	63	68	71	75	80	86	91	93
Technische Hochschule Wien	83	87	93	96	98	100	104	107	110
Technische Hochschule Graz	53	57	61	64	66	68	71	73	73
Montanistische Hochschule Leoben	24	25	26	26	27	29	30	31	31
Hochschule für Bodenkultur Wien	32	34	35	35	35	36	39	40	40
Hochschule für Welthandel Wien	27	29	33	33	34	36	38	41	44
Tierärztliche Hochschule Wien	19	19	20	20	20	21	22	22	22
Hochschule für Sozial- und Wirtschaftswissenschaften Linz	24	30	33	37	39	45	53	59	60
Hochschule für Bildungswissenschaften Klagenfurt	-	-	-	-	-	6	12	15	20
insgesamt	723	797	856	884	906	950	1018	1060	1080

Table 25: University assistants according to the 1974 schema of authorized posts: by universities and Faculties

Hochschule/Fakultät	
Universität Wien	1.685
Katholisch-theologische	22
Evangelisch-theologische	8
Rechts- und staatswissenschaftliche	114
Medizinische	1.011
Philosophische	530
Universität Graz	638,5
Theologische	15
Rechts- undsstaatswissenschaftliche	72
Medizinische	346
Philosophische	205.5
Universität Innsbruck	674,5
Theologische	20
Rechts- und staatswissenschaftliche	64,5
Medizinische	333
Philosophische	183
Bauingenieurwesen und Architektur	74
Universität Salzburg	233,5
Theologische	19
Rechts- und staatswissenschaftliche	68,5
Philosophische	146

Hochschule/Fakultät	
Technische Hochschule Wien	529
Bauingenieurwesen und Architektur	120.5
Maschinenbau und Elektrotechnik	162,5
Naturwissenschaftliche	246
Technische Hochschule Graz	332,5
Bauingenieurwesen und Architektur	101,5
Maschinenbau und Elektrotechnik	125
Naturwissenschaftliche	106
Montanistische Hochschule	92
Hochschule für Bodenkultur	107
Tierärztliche Hochschule	103
Hochschule für Welthandel	105
Hochschule für Sozial- und Wirtschaftswissenschaften	156
Sozial-, wirtschafts- und rechtswissenschaftliche	100
Technisch-naturwissenschaftliche	56
Hochschule für Bildungswissenschaften	39
Insgesamt (1)	4.628

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(1) In der Aufstellung sind 57 außerordentliche Professoren nach § 10a HOG enthalten

Table 26: Departments and chairs (deadline: August 1, 1974)

HOCHSCHULE BZW. FAKULTAET	INSTITUTE MIT ... LEHRKANZELN 1	2	3	4	5	6	7	8	9	10	ANZAHL DER INSTITUTE MIT LEHRKANZELN	INSTITUTE OHNE LEHRKANZELN	ANZAHL DER INSTITUTE	LEHRKANZELN OHNE INSTITUT	INSGESAMT
KATH.THEOL.FAK.	12	1	-	-	-	-	-	-	-	-	13	2	15	1	16
EVANG.THEOL.FAK.	5	1	-	-	-	-	-	-	-	-	6	-	6	-	6
RECHTS-U.STW.FAK	4	4	4	-	-	1	1	-	-	-	14	4	18	5	23
MED.FAK.	43	4	2	-	-	-	-	-	-	-	49	1	50	4	54
PHIL.FAK.	22	13	7	12	3	2	-	1	-	-	60	7	67	4	71
UNIV. WIEN GES.	86	23	13	12	3	3	1	1	-	-	142	14	156	14	170
THEOL.FAK.	6	3	-	-	-	-	-	-	-	-	9	-	9	2	11
RECHTS-U.STW.FAK	24	3	-	-	-	-	-	-	-	-	27	1	28	4	32
MED.FAK.	23	-	-	-	-	-	-	-	-	-	23	-	23	4	27
PHIL.FAK.	20	11	4	1	1	-	-	-	-	-	37	5	42	1	43
UNIV. GRAZ GES.	73	17	4	1	1	-	-	-	-	-	96	6	102	11	113
THEOL.FAK.	4	1	2	1	-		-	-	-	-	8	-	8	-	8
RECHTS-U.STW.FAK	8	4	2	2	-		-	-	-	-	16	2	18	-	18
MED.FAK.	25	3	1	-	-		-	-	-	-	29	-	29	2	31
PHIL.FAK.	25	12	1	2	-		-	-	-	-	40	9	49	1	50
BAUING.U.ARCH.	17	-	1	-	-		-	-	-	-	18	-	18	4	22
UNIV. IBK GES.	79	20	7	5	-	-	-	-	-	-	111	11	122	7	129
THEOL.FAK.	11	-	1	-	-	-	-	-	-	-	12	-	12	-	12
RECHTS-U.STW.FAK	11	4	1	-	-	-	-	-	-	-	16	1	17	3	20
PHIL.FAK.	9	9	3	2	-	1	-	-	-	-	24	3	27	4	31
UNIV. SALZB.GES.	31	13	5	2	-	1	-	-	-	-	52	4	56	7	63
BAUING.U.ARCH.	33	-	-	-	-	-	-	-	-	-	33	-	33	1	34
MASCHW.U.ELTECH.	29	1	1	-	-	-	-	-	-	-	31	2	33	-	33
NATURWISS.FAK.	38	1	-	-	-	-	-	-	-	-	39	3	42	2	44
TH WIEN GES.	100	2	1	-	-	-	-	-	-	-	103	5	108	3	111
BAUING.U.ARCH.	23	-	-	-	-	-	-	-	-	-	23	-	23	2	25
MASCHW.U.ELTECH.	27	-	-	-	-	-	-	-	-	-	27	-	27	1	28
NATURWISS.FAK.	18	1	-	-	-	-	-	-	-	-	19	1	20	-	20
TH GRAZ GES.	68	1	-	-	-	-	-	-	-	-	69	1	70	3	73
MONTANISTISCHE HS	29	-	-	-	-	-	-	-	-	-	29	2	31	2	33
HS F. BODENKULTUR	29	5	-	-	-	-	-	-	-	-	34	4	38	1	39
TIERAERZTLICHE HS	21	-	-	-	-	-	-	-	-	-	21	5	26	1	27
HS F. WELTHANDEL	20	8	-	-	-	-	-	-	-	-	28	-	28	9	37
SO-WI-RE FAK.	23	2	-	-	-	-	-	-	-	-	25	-	25	12	37
TECHN.NATW.FAK.	-	-	1	1	-	1	1	-	-	-	4	3	7	1	8
HS LINZ GES.	23	2	1	-	-	1	1	-	-	-	29	3	32	13	45
HS KLAGENFURT	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20
WISS.HS INSGESAMT	559	91	31	21	4	5	2	1	-	-	714	55	769	91	860